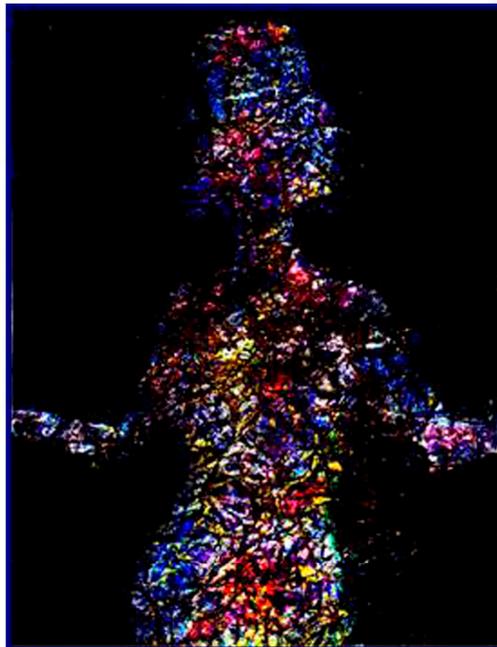


THE LORD SHALL COUNT

Mathematics, music
and cryptography in
the Bible

David Z. Crookes



I have heard David lecture in Icelandic on ancient mathematics. Now I can read with confidence the book about the Bible which he has written in English.

Pétur Halldórsson (author of *The Measure of the Cosmos*)

David learned his cryptanalysis in the real world before he came to deal with cryptograms in the Hebrew and Greek texts of the Bible.

Georgia Durante (model, Hollywood stunt-driver, and author of *The Company She Keeps*)

The author is by nature a man who likes to work with a chisel or a spade. He tells his complex tale in language that many ordinary people will be able to understand.

William Warwick (farmer and science technician)

David is a straight-talking Brethren preacher. Like the Psalmist he can say, 'I rejoice at thy word, as one that findeth great spoil.'

John Carson CBE (former Member of Parliament and Lord Mayor of Belfast)

Singers and instrumentalists who acquire David's book will be able to perform pieces of music that were written three thousand years ago.

Colin Murdock (former professional and international footballer)

David Crookes is a hard hitter who wastes no mercy on 'Bible-code' nonsense. He attacks the decayed trees of the academic world not with a pen, but with a great axe.

Colin Graham (ex-prisoner, poet, preacher, and DZC's sparring instructor)

Years ago in Gothenburg I attended a harp-making course which David conducted in Swedish. His new book tells us about the tuning of harp-strings in ancient Israel!

Derek McCullough (musician and educator)

David makes an enormous number of references to world literature. By doing so, he reaches out in friendship to readers from many different nations, especially China.

Lucy Evangelista (model and former Miss UK)

The man or woman who begins to study the Bible seriously after reading this book will soon discover that God can change any person in any place.

John Newell (former prison governor)

The fundamentalist scholar David Z Crookes is British, and lives in Belfast, where he was born in 1952. He holds degrees in Latin and Hebrew, in German, and in music. After leaving university he gained a professional qualification in musical instrument-making, and a diploma for a thesis on sports administration. His poetry has appeared in various periodicals. His publications in scholarly journals include articles on Chinese, English, French, Greek, Hebrew, Italian, Latin, Norwegian, Russian, and Spanish literature; education; mathematics; early music performance; and the making of musical instruments. As director of his own early music consort, and as an instrumentalist, Crookes has broadcast for the BBC both nationally and on the World Service. Over the years, in addition to making replicas of many ancient, medieval and Renaissance instruments, he has taught instrument-making courses in the United Kingdom and in Europe. (When time allows he paints, and every year he teaches an art course for suitably robust novices.) Crookes has written a good deal of music, including two specially commissioned toccatas for organ. His translation from German of Michael Praetorius' *De Organographia I-II* (the book behind much of the early music revival) was published by Oxford University Press as a hardback in 1986, and as a paperback in 1991. In *THE LORD SHALL COUNT* Crookes draws on the experience of an adventurous life to reveal the presence in Scripture of cryptical Messianic prophecies; gematric alphabets; figurate numbers; the square and cube roots of two and three; the numbers minus one, zero, *e*, *i*, *pi*, and *phi*; prime numbers; authorial signatures; the Davidic musical system; equal temperament; and the notation of polyphonic musical compositions.

THE LORD SHALL COUNT

BEING NOT ONLY

A DISCURSIVE TREATISE ON

MATHEMATICS, MUSIC, AND
CRYPTOGRAPHY IN THE BIBLE

BUT ALSO

A BOOK ABOUT LITERATURE

AND

AN INTRODUCTION TO SEVERAL DISCIPLINES

BY

DAVID Z CROOKES

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The cover design by Pétur Halldórsson incorporates a photograph of a famous Icelandic landscape (upper left), a photograph of the author playing a gemshorn in the course of a lecture (upper right), and two of the author's balletic paintings. *Wisdom* (lower left) refers to Princess Aurora from Chaykovsky's *Nutcracker*, while *The Shulamite* (lower right) refers to Stravinsky's *Firebird*.

THE LORD SHALL COUNT is dedicated by the author to the glory of God, and to the memory of Ruth Whitley (1965-2006), good friend and Christian soldier.

Following the example of Sergiu Celibidache, many of whose courses were free of charge and open to all, the author and the publisher have decided to allow the first internet edition of *THE LORD SHALL COUNT* to be downloaded without a fee. Any individual person is at liberty to print off a single copy of the book, and so is any individual department of any school, college, university, conservatory, or library. No restriction of any kind applies to the uncommercial printing, photocopying, or performance of any of the music which the book contains. In addition, the table which appears on page 429 is copyright-free. Aside from these provisions, and except for brief quotations embodied in critical articles or reviews, no part of the book may be reproduced in any manner whatever without the permission of the publisher.

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*Two and thirtie windes Maryners finde out,
By which they saylen the round worlde about.*

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CHAPTER 1: HE LAUGHETH AT THE SHAKING OF A SPEAR

我 本 楚 狂 人

(= I am the mad man who comes from Chu).

Li Bai

My father's father was born in the north of Ireland.....

Woodrow Wilson

יהוה יספר בכתוב עמים זה ילד שם

(= The LORD shall count, when he writeth up the people, that this man was born there).

Psalms 87. 6

'Whence comest thou?' the mariners asked Jonah. That's a fair question. I live in Belfast, the capital of Northern Ireland, which is part of the United Kingdom. St Paul would have called Belfast 'no mean city'. Here in 1792 the revival of early music began. Here in 1873 the word *radian* first appeared on a printed page. Here in 1898 C S Lewis was born. (Twenty years later Chaim Herzog, sixth president of Israel, was born in Belfast, and his brother-in-law Abba Eban lived in the city for some time.) The world's oldest English-language daily newspaper is the *Belfast News Letter*. *Brewer's Dictionary of Phrase and Fable* defines Belfast in cultural terms as 'The Athens of Ireland'. And years ago, speaking of Belfast, the ballerina Tamara Rojo said to me in a letter, 'Dancing there, I felt at home.' That brief sentence made me glad to be a Belfastman.

Northern Ireland is often referred to as 'Ulster'. It is a wonderful country to live in. Here you find the Mourne Mountains, with their exquisitely graceful contours. Here you find Lough Neagh, which is home to the largest wild eel fishery in Europe. And here you find the Giant's Causeway, an assembly of interlocking basalt columns, most of them hexagonal in cross-section. According to legend the Causeway was built by an Irish giant called Finn MacCool.

The large town of Antrim lies about twenty miles from Belfast, and the even larger town of Ballymena lies about thirty miles from Belfast. Every Saturday, when I was a younger man, I used to go home on the blue Belfast-via-Antrim bus after playing a recreational match in Ballymena. The bus would take twenty minutes to reach Antrim, and then stop in the station for ten minutes or so. Usually the driver would park his vehicle beside another blue bus.

For want of something to do I would count the rivets which joined the roof of the other bus to its visible side. The average number was about one hundred and forty-two. When I had counted from left to right, I would check the number by

counting from right to left. At the time I couldn't have told you the point of what I was doing, but I did it nonetheless. I'm glad now that I did. Counting is a discipline like anything else.

Often we need to COUNT if we want to REMEMBER.

Pretend that you're an intelligence officer. Whenever you learn several facts, you must pack them away neatly in your own mind.

Five numbers appear in the third and fourth paragraphs of page 1. How may you commit those numbers to memory?

Well, you can compress them, or boil them down, so as to produce one 'information-number'.

You can also take note of any pattern or relationship which manifests itself.

Look at the four numbers which have to do with *distances* or *times*: twenty miles, thirty miles, twenty minutes, ten minutes.

Concatenate these four numbers so as to produce a single eight-digit number.

20302010

Delete the zeroes.

2321

Find the prime factors of 2321.

11 x 211

Work out the sum of the two prime factors.

11 + 211 = 222

Now work out the sum of the FIVE numbers which appear in the third and fourth paragraphs of the previous page. In addition to the four distance-or-time numbers, remember, you have the average number of rivets.

20 + 30 + 20 + 10 + 142 = 222

Here you see an example of *fortuitous felicity*.

Don't get all excited. There's nothing remarkable about your pair of equations.

The two identical totals represent an accident, and an accident by definition is *something which happens*.

The number 222 may encode either the first four numbers, or all five numbers.

Between the average number of rivets (142) and the four time-or-distance numbers (20 30 20 10), there exists a tenuous relationship.

But even apart from that relationship, 222 is an easy number to remember.

Since you want to engrave the number on your memory, you start muttering to yourself. 'Two, two, two. Three twos. Two, two, two. Three twos.'

After a while you think of what Lewis Carroll might have said,

What I tell you THREE times is TWO.

And now you begin to wonder. Is it possible to turn the number 222 into a kind of PICTURE? Yes, it is. 'Two, two' makes you think of ballet.

In *Swan Lake*, as you've known since your tenth year, the prima ballerina wears a *white* tutu when she's dancing the part of Odette, and a *black* tutu when she's dancing the part of Odile.

So you imagine Odette wearing 'tutu one', and Odile wearing 'tutu two'. The image of Odile dressed in 'tutu two' will help you to remember the five different numbers (20, 30, 20, 10, and 142) which add up to 222.

Let's go further. Suppose that you want to engrave upon your memory the names of BELFAST, ANTRIM, and BALLYMENA.

How may you do that? One simple way is to count the letters in each name, and then to express each name as one digit of a three-digit number.

There are seven letters in BELFAST, six letters in ANTRIM, and nine letters in BALLYMENA. The three names may therefore be encoded in the number 769.

You wonder if it's possible to bring everything together. Can you combine the number 222 ('tutu two') with the number 769 *in a single three-digit number?*

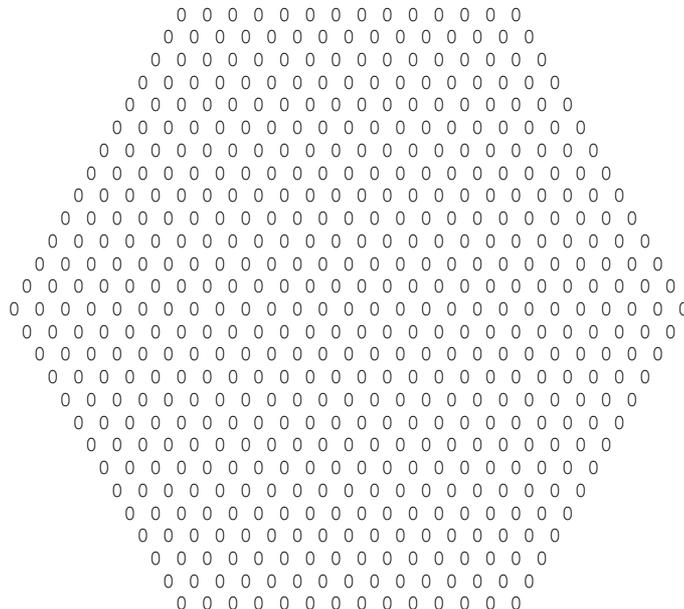
Yes, of course! You can either add one number to the other.....

$$769 + 222 = 991$$

.....or subtract the smaller number from the bigger number.

$$769 - 222 = 547$$

I don't know which of these two 'information-numbers' you prefer to remember. In your place I'd go for 547: first because it's smaller than 991, and secondly because it happens to be the 'centred hexagonal number' of fourteen.



Now we've turned the information into a HEXAGON. (Think: *Swan Lake* meets the Giant's Causeway, or ballet meets basalt.) That'll be easy to remember. Too easy, sez you? Then let us increase the amount of information. Suppose that you want to encode in numerical form the *precise spellings* of BELFAST, ANTRIM, and BALLYMENA. How should you set about the job?

You can do what people did a long time ago. The ancient Israelites employed a 22-letter numerical alphabet of units, tens, and hundreds. Their alphabet is read from right to left. It runs aleph, beth, gimel, dalet, he, wau, zayin, cheth, teth, yodh, kaph, lamedh, mem, nun, samekh, ayin, pe, tzaddi, qoph, resh, s[h]in, tau.

א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת

The numerical values of the Hebrew alphabet are shown below.

aleph = 1, beth = 2, gimel = 3, dalet = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

For their part the ancient Greeks employed a slightly less predictable 24-letter numerical alphabet of units, tens, and hundreds. Their alphabet is read from left to right. It runs alpha, beta, gamma, delta, epsilon, zeta, eta, theta, iota, kappa, lambda, mu, nu, xi, omicron, pi, rho, sigma, tau, upsilon, phi, chi, psi, omega.

α β γ δ ε ζ η θ ι κ λ μ ν ξ ο π ρ σ τ υ φ χ ψ ω

The numerical values of the Greek alphabet are shown below.

alpha = 1, beta = 2, gamma = 3, delta = 4,

epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,

nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,

phi = 500, chi = 600, psi = 700, omega = 800

We can easily construct a numerical English alphabet on the Hebrew model.

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9

J = 10, K = 20, L = 30, M = 40, N = 50, O = 60, P = 70, Q = 80, R = 90

S = 100, T = 200, U = 300, V = 400, W = 500, X = 600, Y = 700, Z = 800

Let me give you some counsel before we go any further. First, don't panic at the sight of two strange alphabets. We'll learn to write Hebrew and Greek letters when we get to chapter 18. In the meantime, I'll spell out the letter-names of any Hebrew or Greek characters that you have to work with. Secondly, don't panic if you meet quotations from world literature. Apart from helping me to make my own case, these quotations allow me to engage with readers whose first language is not English. (May as well tell you. I'm writing a book which will not be easy to translate!) And now it's time for us to add up twenty-two letters.

In terms of our English numerical alphabet, BELFAST adds up to 344.

$$B = 2, E = 5, L = 30, F = 6, A = 1, S = 100, \text{ and } T = 200.$$

$$2 + 5 + 30 + 6 + 1 + 100 + 200 = 344$$

ANTRIM adds up to 390.

$$A = 1, N = 50, T = 200, R = 90, I = 9, \text{ and } M = 40.$$

$$1 + 50 + 200 + 90 + 9 + 40 = 390$$

BALLYMENA adds up to 859.

$$B = 2, A = 1, L = 30, L = 30, Y = 700, M = 40, E = 5, N = 50, \text{ and } A = 1.$$

$$2 + 1 + 30 + 30 + 700 + 40 + 5 + 50 + 1 = 859$$

All three names add up to 1593.

$$[BELFAST = 344] + [ANTRIM = 390] + [BALLYMENA = 859] = 1593$$

What have we been doing? COUNTING THE NUMBER. Revelation 13. 18 says, *Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of a man; and his number is Six hundred threescore and six.* The English expression 'Six hundred threescore and six' is represented in Greek by three words. As we'll see in chapter 32, the person who has 'understanding' will count the number of the beast by *adding up the numerical values of those three Greek words.* You don't count the number of the beast, and you don't display a special 'understanding', merely by reading the number 666.

Think back now to the number 222, which combines two sets of miles and two sets of minutes with one set of rivets.

$$20 \text{ miles} + 30 \text{ miles} + 20 \text{ minutes} + 10 \text{ minutes} + 142 \text{ rivets} = 222 \text{ ('tutu two')}$$

When you add the 1593 of the three proper nouns to the balletic 222, you combine eight different pieces of information in a really memorable number.

$$222 + 1593 = 1815$$

The battle of Waterloo was fought in 1815, nearly three years after the battle of Borodino, and hereby hangs the tremendous tale which is called *Война и мир*. If you've read Tolstoy's novel *War and Peace*, you'll recall how Pierre plays about with a strange numerical alphabet. One of Pierre's masonic friends has revealed to him that Napoleon is referred to not only in Revelation 13. 18.....

Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of a man; and his number is Six hundred threescore and six.

.....but also in Revelation 13. 5.

And there was given unto him a mouth speaking great things and blasphemies; and power was given unto him to continue forty and two months.

What makes it possible to identify Napoleon as the Beast? A numerated French alphabet which runs from 1 to 160.

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I (or J) = 9

K = 10, L = 20, M = 30, N = 40, O = 50, P = 60, Q = 70, R = 80, S = 90

T = 100, U = 110, V = 120, W = 130, X = 140, Y = 150, Z = 160

Let me quote and translate a short passage from the text of *War and Peace*.

Написав по этой азбуке цифрами слова L'Empereur Napoléon, выходит, что сумма этих чисел равна 666-ти и что поэтому Наполеон есть тот зверь, о котором предсказано в Апокалипсисе. Кроме того, написав по этой же азбуке слова quarante deux, то есть предел, который был положен зверю глаголати велика и хульна, сумма этих чисел, изображающих quarante deux, опять равна 666-ти, из чего выходит, что предел власти Наполеона наступил в 1812-м году, в котором французскому императору минуло 42 года. Предсказание это очень поразило Пьера, и он часто задавал себе вопрос о том, что именно положит предел власти зверя, то есть Наполеона, и, на основании тех же изображений слов цифрами и вычислениями, старался найти ответ на занимавший его вопрос. Пьер написал в ответ на этот вопрос: L'Empereur Alexandre? La nation Russe? Он счел буквы, но сумма цифр выходила гораздо больше или меньше 666-ти. Один раз, занимаясь этими вычислениями, он написал свое имя — Comte Pierre Besouhoff; сумма цифр тоже далеко не вышла. Он, изменив орфографию, поставив z вместо s, прибавил de, прибавил article le и все не получал желаемого результата. Тогда ему пришло в голову, что ежели бы ответ на искомый вопрос и заключался в его имени, то в ответе непременно была бы названа его национальность. Он написал Le Russe Besuhof и, сочтя цифры, получил 671. Только 5 было лишних; 5 означает «е», то самое «е», которое было откинута в article перед словом L'Empereur. Откинув точно так же, хотя и неправильно, «е», Пьер получил искомый ответ: l'Russe Besuhof, равное 666-ти. Открытие это взволновало его. Как, какой связью был он соединен с тем великим событием, которое было предсказано в Апокалипсисе, он не знал; но он ни на минуту не усумнился в этой связи.

When the words *L'Empereur Napoléon* [= the Emperor Napoleon] are transcribed in terms of this numerical alphabet, the total value of the numerated letters turns out to be 666, indicating that Napoleon is the Beast who is prophesied in the book of Revelation. Furthermore, when the same system is applied to the word QUARANTE-DEUX [= forty-two], the number of months allotted to the Beast who 'spoke great things and blasphemies', the number 666 emerges once again, indicating that the year 1812, during which the French emperor would attain the age of forty-two years, would mark the ordained limit of Napoleon's power. This prophecy was a source of great delight to Pierre. Often he would ask himself: what would put an end to the power of the Beast, that is, of Napoleon? By employing the same system (using letters as numbers, and adding them up), he tried to find an answer to the question that fascinated him. He wrote out the words L'EMPEREUR ALEXANDRE [= the Emperor Aleksandr], and LA NATION RUSSE [= the Russian nation]. Then he added up the numbers of their letters, but

the totals came out as either greater or smaller than 666. On one occasion, when he was occupied with calculations like these, he transcribed the French form of his own name (COMTE [= Count] PIERRE BESOUHOFF), but the numbers didn't add up to the right total. Pierre went on to change the spelling. He replaced the S with a Z. He also added DE [= of], and inserted the article LE [= the]. Still he was unable to get the result that he wanted. After a while he had an idea. Was the answer to the question contained in his name? Then his nationality would also feature in the answer. So he wrote down the words LE RUSSE [= the Russian] BESUHOF. When he added up the numbers, he got a total of 671. That was only five more than he required, and five was the value of E, the very letter which is dropped from the article LE when it appears before the word EMPEREUR. So Pierre left out the E, in defiance of correct usage, and got the answer that he was looking for. L'RUSSE BESUHOF added up to 666. This discovery thrilled him. If he didn't know exactly how he was linked with the great event which was prophesied in Revelation, he didn't doubt for a minute that the link was real.

Many readers smile when they see Pierre working with a numerical alphabet.

| |
|--|
| <p>A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I (or J) = 9 K = 10, L = 20, M = 30, N = 40, O = 50, P = 60, Q = 70, R = 80, S = 90 T = 100, U = 110, V = 120, W = 130, X = 140, Y = 150, Z = 160</p> |
|--|

Most of these readers don't see the enormous joke which Tolstoy has hidden in the first cryptogram (L'EMPEREUR NAPOLÉON). What *is* the joke? Well, QUARANTE-DEUX really does add up to 666.

$$Q = 70, U = 110, A = 1, R = 80, A = 1, N = 40, T = 100, E = 5$$

$$D = 4, E = 5, U = 110, X = 140$$

$$[70 + 110 + 1 + 80 + 1 + 40 + 100 + 5] = 407, \text{ and } [4 + 5 + 110 + 140] = 259$$

$$[407 + 259] = 666$$

But L'EMPEREUR NAPOLÉON does not.

$$L = 20, E = 5, M = 30, P = 60, E = 5, R = 80, E = 5, U = 110, R = 80,$$

$$N = 40, A = 1, P = 60, O = 50, L = 20, É = 5, O = 50, N = 40$$

$$[20 + 5 + 30 + 60 + 5 + 80 + 5 + 110 + 80] = 395$$

$$[40 + 1 + 60 + 50 + 20 + 5 + 50 + 40] = 266$$

$$[395 + 266] = 661$$

While LE RUSSE BESUHOF at 671 needs to *lose* five, L'EMPEREUR NAPOLÉON at 661 needs to *gain* five. If we want the Emperor to be truly beastly we must say LE EMPEREUR NAPOLÉON, which is impossible. So a simple piece of counting reveals the 'prophecy' to be a piece of nonsense.

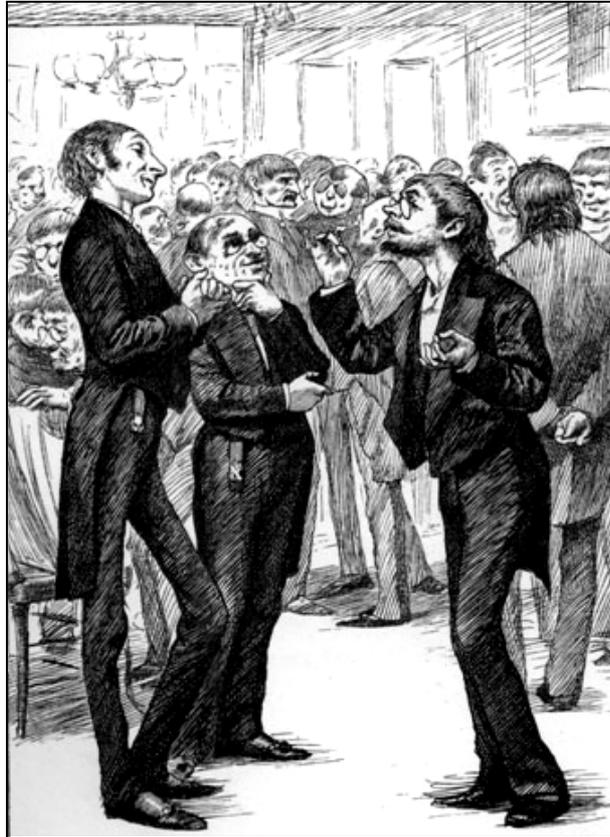
| |
|---|
| <p>When the words <i>L'Empereur Napoléon</i> are transcribed in terms of this numerical alphabet, the total value of the numerated letters turns out to be 666.....</p> |
|---|

How do such pieces of numerical nonsense ever achieve currency?

That question is easily answered.

Some people are too idle to check anything.

Other people remain credulous in the face of a disobliging fact. (Why so? Because they don't want to be informed. They want to be aroused.)



In the pursuit of feeble thrills, credulous people often approach particular passages of Scripture.

Revelation 13 is a great favourite, and so is Psalm 46.

Let us examine Psalm 46 as it is found in the Authorized Version of the Bible (henceforth AV). For our present purpose we'll leave out both the heading and the verse-numbers. The word *Selah*, which appears at three points, is a musical repeat-sign. *Selah* means, 'Sing the foregoing sentence for a second time.'

God is our refuge and strength, a very present help in trouble.

Therefore will not we fear, though the earth be removed, and though the mountains be carried into the midst of the sea;

Though the waters thereof roar and be troubled, though the mountains shake with the swelling thereof. Selah.

There is a river, the streams whereof shall make glad the city of God, the holy place of the tabernacles of the most High.

God is in the midst of her; she shall not be moved: God shall help her, and that right early.

The heathen raged, the kingdoms were moved: he uttered his voice, the earth melted.

The LORD of hosts is with us; the God of Jacob is our refuge. Selah.

Come, behold the works of the LORD, what desolations he hath made in the earth.

He maketh wars to cease unto the end of the earth; he breaketh the bow, and cutteth the spear in sunder; he burneth the chariot in the fire.

Be still, and know that I am God: I will be exalted among the heathen, I will be exalted in the earth.

The LORD of hosts is with us; the God of Jacob is our refuge. Selah.

Now you tell me that over breakfast today you read two portions of Scripture: Psalm 46, and the second chapter of Genesis. Very good. Later in the day, four of your credulous friends from the local art college tell you that Shakespeare's surname is encoded in Psalm 46. 'Many respected authors refer to this remarkable phenomenon,' they say. 'The forty-sixth word from the beginning is SHAKE, and the forty-sixth word from the end is SPEAR. Such an obvious piece of symmetry cannot be a coincidence.'

Well, you reckon that it *can* be a coincidence, but you do what many respected authors have not bothered to do. You count the words for yourself. And you discover that while SHAKE is indeed the forty-sixth word from the beginning.....

1 = GOD, 2 = IS, 3 = OUR, 4 = REFUGE, 5 = AND, 6 = STRENGTH, 7 = A,
8 = VERY, 9 = PRESENT, 10 = HELP, 11 = IN, 12 = TROUBLE, 13 = THEREFORE,
14 = WILL, 15 = NOT, 16 = WE, 17 = FEAR, 18 = THOUGH, 19 = THE, 20 = EARTH,
21 = BE, 22 = REMOVED, 23 = AND, 24 = THOUGH, 25 = THE, 26 = MOUNTAINS,
27 = BE, 28 = CARRIED, 29 = INTO, 30 = THE, 31 = MIDST, 32 = OF, 33 = THE,
34 = SEA, 35 = THOUGH, 36 = THE, 37 = WATERS, 38 = THEREOF, 39 = ROAR,
40 = AND, 41 = BE, 42 = TROUBLED, 43 = THOUGH, 44 = THE, 45 = MOUNTAINS,
46 = SHAKE

.....SPEAR is the forty-seventh word from the end.

1 = SELAH, 2 = REFUGE, 3 = OUR, 4 = IS, 5 = JACOB, 6 = OF, 7 = GOD,
8 = THE, 9 = US, 10 = WITH, 11 = IS, 12 = HOSTS, 13 = OF, 14 = LORD,
15 = THE, 16 = EARTH, 17 = THE, 18 = IN, 19 = EXALTED, 20 = BE, 21 = WILL,
22 = I, 23 = HEATHEN, 24 = THE, 25 = AMONG, 26 = EXALTED, 27 = BE,
28 = WILL, 29 = I, 30 = GOD, 31 = AM, 32 = I, 33 = THAT, 34 = KNOW, 35 = AND,
36 = STILL, 37 = BE, 38 = FIRE, 39 = THE, 40 = IN, 41 = CHARIOT, 42 = THE,
43 = BURNETH, 44 = HE, 45 = SUNDER, 46 = IN,
47 = SPEAR

When you share the second of these facts with your Shakespeare-loving friends, you find that they aren't amenable to correction.

'You're including the final word *Selah*,' they say. '*Selah* isn't really a word.'

What's the lesson?

I'll tell you. NOTHING can be done with credulous people.

Those who are determined to find the number forty-six in a particular text will contrive to find it.

If the text as it stands refuses to oblige them, they will FIDDLE the text, and compel it to furnish them with the number forty-six.

Or with the number thirteen, which is much revered not only by village prophets of the *Mark-my-words* school, but also by your four friends.



Having recently discovered that Shakespeare wrote thirteen comedies, your four friends are inclined to find great 'significance' in groups of thirteen letters like THE WHITE HOUSE, and MASONIC LODGES, and of course THE ILLUMINATI.

'One respected author refers to the historical importance of *thirteen letters*,' your friends declare. 'He sees the name of WOODROW WILSON as being *notably significant*.'

You feel like asking what the respected author would make of three consecutive words from Jonah 4. 9. DOEST THOU WELL?

And you can hardly believe what your four friends go on to tell you.

The twelve letters of UNITED STATES don't accommodate themselves to a tredecimal world-view, so the respected author adds an extra E, and unveils what he is pleased to call 'the well hidden or shrouded words UNITED ESTATES'. Isn't the letter E a gem? LE EMPEREUR NAPOLÉON meets the UNITED ESTATES.

In the presence of wilful credulity, the most basic facts of language dissolve. Thus Pierre leaves out the E of LE, in defiance of correct usage. Thus your friends tell themselves that the word *Selah* isn't really a word, and leave it out.

How do we respond to the appearance of Shakespeare in Psalm 46? We behave like the leviathan, of which it is written in Job 41. 29,

.....*he laugheth at the shaking of a spear.*

Or we behave like the shining sun in *The Shepherd's Calendar*. As you recall, Edmund Spenser makes the old shepherd THENOT speak of a time

.....*when the shining sunne laugheth.....*

'What has that old shepherd got to do with anything?' your friends ask angrily.

Tee, hee! They'll see in a moment. You and I are going to perform an experiment. We'll stay with the AV, and select chapter *n* from some book of the Bible. Then we'll see if the *n*th word from the beginning of the chapter combines with the *n*th word from the end of the chapter to form a name. What portion of Scripture did you read along with Psalm 46 over breakfast today?

'The second chapter of Genesis,' sez you.

All right. Look at Genesis chapter 2, which begins with the words *Thus THE heavens*, and ends with the words *were NOT ashamed*. The second word from the beginning of the chapter is THE, and the second word from the end of the chapter is NOT. Does the second chapter of Genesis contain a cryptic reference to Spenser's character THENOT?

No. It is a fact of mere fortuity that the *n*th word from the beginning of chapter *n* combines with the *n*th word from the end of chapter *n* to form a name. That fact is worse than trivial. (So is the fact that EDMUND SPENSER's name contains a total of thirteen letters.)

'But there are three TWOS!' say your credulous friends. 'Chapter TWO, word number TWO from the beginning, and word number TWO from the end. Furthermore, the translators of the AV would all have been familiar with the work of Edmund Spenser. That set of three TWOS cannot be without significance!'

Is there something wonderful about three twos? Then we should go back to talking about rivets in blue buses, and ballerinas in black tutus. You remember the five numbers whose total is two hundred and twenty-two, or 'two-two-two'.

$$20 \text{ miles} + 30 \text{ miles} + 20 \text{ minutes} + 10 \text{ minutes} + 142 \text{ rivets} = 222$$

Numbers coincide. Words coincide as well. In December 1996, *Dance Magazine* published a piece about the Russian ballerina Maya Plisetskaya, under the following title.

PLISETSKAYA: STILL RIVETING AT 71

(Halfway along the top of the bus, sez you, dressed in a balletic welding-suit.)

Such an image belongs to the Eurotrash version of *Siegfried* that you endured a few years ago in Bayreuth. Be quiet, and listen!

Words really *do* coincide. Those who study poetry are well aware of the fact.

In one of his most celebrated pieces of verse, the Italian poet Eugenio Montale wrote about *l'odore dei limoni* (= the fragrance of the lemon-trees), and about little birds.

*Meglio se le gazzarre degli uccelli
si spengono.....*

It's better if the chatter of the little birds
is silenced.....

The German poet Johann Wolfgang von Goethe also wrote about lemon-trees.

Kennst du das Land, wo die Zitronen blühen.....?

(= Do you know the land where the lemon-trees blossom.....?).

Goethe even wrote about little birds that fall silent.

Die Vögelein schweigen im Walde (= The little birds are quiet in the forest).

If you like reading about lemon-trees and birds, you should consider the four pieces of literature which follow.

The first piece comes from a poem by Odysseus Elitis called 'Drinking the sun of Corinth'. I have unscrupulously rendered the words της καλοκαιριάς (= of the fair weather [to come]) with a well-known English phrase.

Οι λεμονιές αρδεύουνε τη γύρη της καλοκαιριάς

(= The lemon-trees transmit their sap to the pollen of a bright tomorrow).

The second piece comes from Nizar Qabbani's poem 'Jerusalem'.

غداً.. غداً.. سيزهر الليمون

(= Tomorrow.....tomorrow.....the lemon-trees will blossom).

The third piece comes from Jeremiah 4. 25.

אין האדם וכל-עוף השמים נדדו

(= there was no man, and all the birds of the heavens were fled).

The fourth piece comes from Li Bai's poem 'Regaling myself'.

鳥 遠 人 亦 稀

(= the birds were far away, and men also few).

Now listen to your four friends. When they declare ponderously that the meaning of what Elitis says in Greek is similar to the meaning of what Qabbani says in Arabic, and that the meaning of what Jeremiah says in Hebrew is similar to the meaning of what Li Bai says in Chinese, they're being sensible enough. When they go on to declare that the similarities cannot be without significance, AND STOP THERE, they're being stupid. Numbers coincide, and so do words.

Your friends MUST be able to tell us how the similarities which they observe are 'significant'. Otherwise you'll want to sing the words of Leonard Cohen:

I can't forget, but I don't remember what.

Is there anything useful about a significance which no one is able to define? Consider the curious case of FOUR and FIFTEEN. Queen Victoria was born at 4.15 am on 24 May 1819, and Pope Benedict XVI was born at 4.15 am on 16 April 1927. The Australian singer Cylindra Sapphire was born in 1971 on the fifteenth day of the fourth month, and the Canadian violinist Lara St John was born in 1971 on the fifteenth day of the fourth month. Hypatia of Alexandria was murdered in 415 AD. The Visigoths entered Hispania in 415 AD. King Farouk of Egypt once bagged 344 ducks with 415 rounds. John Dee entered St John's College, Cambridge, when he was fifteen years and four months old. Thérèse of Lisieux entered a Carmelite convent when she was fifteen years and four months old. Bosnia and Herzegovina were ruled by the Turks for four hundred and fifteen years. The Tay Bridge disaster of 1879 involved the 4.15 train from Edinburgh, and the *Titanic* sank in 1912 on the fifteenth day of the fourth month. In Tolstoy's novel *War and Peace* we encounter the equation $4x = 15y$, while in Marriott Edgar's poem 'Albert and his savings' we meet the monetary phrase 'Fifteen and four'. After repeated digs, a trouser pocket in Jack London's novel *Martin Eden* yields 'four dollars and fifteen cents'. Samson Grose in John Buchan's novel *The Island of Sheep* 'fixed 4.15 as the time he was to meet us at the inn-door next morning'. In *The Three Musketeers* Alexandre Dumas allows Athos to say, *Quatre fois quinze font soixante* (= Four times fifteen makes sixty). Frank Sinatra was born at 415 Monroe Street, Hoboken, New Jersey, and the climax of *The Bourne Ultimatum* is set in 415 East 71st Street. About these four-plus-fifteen phenomena we shall say nothing, for the very good reason that *there is nothing whatever to be said*. (I could have done a similar job with FIVE and FOURTEEN. Margaret of Valois, King Norodom Sihamoni, Otto Klemperer, Thomas Gainsborough, Louis Verneuil, Franjo Tuđman, Siân Phillips, Che Guevara, Nasha Aziz, Cate Blanchett, Gabriel Fahrenheit, and the state of Israel were all born on the fourteenth day of the fifth month. In 514 AD St Canice was born, Rabbah Jose died, and the Mayan capital Chichen Itza was founded. John Cleland Guthrie held the rank of captain in the British Army for fourteen years and five months. In Arnold Bennett's novel *The Murder of the Mandarin Vera's* life 'was made a blank for want of fourteen and fivepence'. The collision which caused the Bagley Train Wreck in Utah occurred at 5.14 am on Sunday December 31, 1944. Let me not neglect New South Wales. In 1959 the sum of fourteen pounds and five shillings was donated to the Engadine Rural Fire Brigade.)

Real scholarship can be a divisive affair. If you're a real scholar, you'll feel compelled at times to separate yourself from things, and notions, and people. I mean to say, consider what your four friends are saying now. 'The six cited authors have a total of *thirteen initials*. Furthermore, the three words LEMON, TREE, and BIRD contain the significant total of *thirteen letters*. They also form an anagram of W H Auden's phrase TERRIBLE DEMON. Oh, and the picture on page 10 denotes that Thomas Love Peacock left school at the age of THIRTEEN.'

Gaaahhh! How can your friends claim to be rational human beings? For no good reason I recall a sentence from Shakespeare's play *Timon of Athens*.

*The strain of man's bred out
Into baboon and monkey.*

By coincidence, you recall a line from an Amharic children's song.

አፋፍ ላፋፍ ስሄድ አገኘሁ ዝንጂሮ

(= As I was walking along the hilltop, I found a baboon).

Let no one suggest that the coincidence is 'significant'. A world in which every single thing is 'significant' is a world in which nothing means anything. Sensible people don't want to live in that sort of world. Sensible people want to learn FACTS. So I address my book to sensible people, and in their name I declare war on vain credulity. (It's going to be TOTAL WAR, as you'll realize when you come to later chapters of the book.) I intend to beat superstition like a dog.

'Thy exquisite reason?' asks one of your Shakespeare-loving friends.

I have no *exquisite* reason for it, but I have reason good enough. You see, much of my book is concerned with GEMATRIA: that is, with the cryptic use of numerical Hebrew or Greek alphabets. Here be dragons. You may believe that gematria belongs in the World Encyclopedia of Nonsense along with numerology, the Loch Ness Monster, mystic ogham, the mid-life crisis, Count Duckula, the Drake equation, line-ups of the planets, *Old Moore's Almanac*, odic force, the Ordo Templi Orientis, 'Desiderata', the law of infinitesimals, tarot cards, the taste map of the tongue, never two without three (try counting your ears), the Parisian Halitotic Attack, *Waiting for Godot* (if that isn't the same thing), the Melchizedek Guardians, closure, orgone energy, the Hieroglyphic Monad, vril power, ascended masters, the bizarre Boswells of Roswell, Jordanus Maximus, the Grand Grimoire, a man's 'feminine side', the hockey-stick carbon-footprint Nazi science of anthropogenic climate change, macumba, 'Kum Ba Yah', fairy thorn-trees, cones of power, the Kinsey scale, kundalini, Edgar Cayce, the Key of Life, spontaneous human combustion, the Flower of Life, indigo children, the source named Q, flying lamas, Atlantis, left and right brain personalities, eugenics, bathtub vortices, *sortes Vergilianae*, vegetal light, the *vesica piscis*, voodoo dolls, the id, pyramidology, birth runes, the mathematical theme-parks of Cydonia, inner mermaids, the Mephistophelian gift of remote viewing, five million victims of alien abduction, the gap theory, tree-hugging, the Tooth Fairy, magpie-counting, the reptilian brain, palmistry, the Bermuda Triangle, seventh sons, the Falkirk Triangle, all postcolonial gibbering, Bohemian Grove, the predictions of Harold Camping, feminist theory, the Society of Crystal Skulls International, dialecticism, the Priory of Sion, turquoise attunement bracelets, the Documentary Hypothesis, omoplatoscopy, the 'Bible Code' school of prophecy, reptilian bloodlines, the doctrines of educational ideologues, Milo Rambaldi, the banshee, Betty Shine, Tibetan Nazis with green gloves, embryonic recapitulation, the male gaze, *Bohemian Rhapsody*, haruspicy, horoscopy, the hollow earth, holy laughter, the pseudo-sciences of 'body language' and 'conflict studies', Helena Blavatsky, Sirian Healing, the *Sigillum Dei*, and 'civilised races' (that phrase comes from Charles Darwin, *The Descent of Man*: London, 1871).

At some future period, not very distant as measured by centuries, the civilised races of man will almost certainly exterminate, and replace, the savage races throughout the world. At the same time the anthropomorphous apes, as Professor Schaaffhausen has remarked, will no doubt be exterminated. The break between man and his nearest allies will then be wider, for it will intervene between man in a more civilised state, as we may hope, even than the Caucasian, and some ape as low as a baboon, instead of as now between the Negro or Australian and the gorilla.

Is numerology the 'nearest ally' of gematria? No! Many writers do play their gematric games in the garrets and cellars of occult superstition, but the folly of

these writers cannot be allowed to demean what is a serious authorial tool. Let me write a sentence without giving a footnote. There are people, some of them more highly placed than you might like to believe, who imagine that they communicate by telepathy with inhabitants of the planet Mars. Does the folly of *these* people make it impossible for anyone to write a sensible book about the planet Mars? No, it doesn't. Well, then! I'm writing a sensible book which is largely concerned with gematria.

[No reader should play the booby-trick of the booby-politician by complaining that I have quoted Darwin out of context. In case anyone sees the ape as the 'nearest ally' of humanity, let me cite Vladimir Nabokov: '.....the gap between ape and man is immeasurably greater than the one between amoeba and ape. The difference between an ape's memory and human memory is the difference between an ampersand and the British Museum library.']

One question must be answered. How shall we pronounce the word GEMATRIA? We'll sound the GE- as in GENERIC, the -MA- as in MAJOR, and the -TRIA as in AUSTRIA. That means we'll stress only the second syllable: ge-MA-tri-a.

It is probable that the word GEMATRIA represents a fusion of two Greek vocables: γεωμετρία (= geometry), and γραμματεία (= the office of a scribe). Don't make a big thing of the etymology. Of course it's a fine thing to know where words come from. Literate people will discern Artois in 'artesian', Bengal in 'bungalow', and Cambodia in 'gambodge'. But literate people will be aware that words are allowed to forget about their own roots. The modern word 'denim' has nothing to do with Nîmes, and the modern word 'sleazy' has nothing to do with Silesia. So we shan't require every piece of gematria that we meet to exhibit some 'geometrical' quality. When we talk about gematria in the Bible, we're talking about the cryptic use of numerical Hebrew or Greek alphabets.

As for how we come to be talking about gematria at all, the tale is soon told. During my early years I learned to read, to write, and to calculate. (Our English verb 'calculate' is descended from the Latin noun *calculus*, which means 'pebble'. Behind the etymology lies the fact that many people in former times used small pebbles as counters.) My first school employed counting sticks in place of pebbles. These sticks were not the red-green-blue-and-yellow artefacts of today, blithe and merry as the rails of a kindergarten fence. They were dark unglad things, lacquered in the morbid purples and greens of the *Ballets Russes*. Any form of insalubrity can cause a child to stumble. To my young mind it appeared that mathematics was a dark unglad business.

So it might have remained, if at the age of twelve I had not opened *Mathematics for the Million*, by Lancelot Hogben (London, 1949). Here I first encountered figurate numbers. And here I first met gematria, for which Hogben – poet, zoologist, and creator of the language Interglossa -- didn't have a lot of time.

Gematria is the name for the quaint superstitions which arose in connexion with the use of alphabet letters for numbers of the Hebrews and Greeks.

That remark awoke my interest. Hogben may have failed to impress Virginia Woolf with his poetry, but he led me into two areas that many earnest mathematicians are happy to ignore. Let me therefore salute his memory.

I did a lot of learning in a book-filled house. My father introduced me to Hebrew, and my mother taught me that every piece of writing should have a *shape*. Outside the home I was lucky enough to receive a substantially Victorian education in the very school that Lord Kelvin and Sir Joseph Larmor had once attended. Several of my teachers were born, as some of my textbooks were first published, in the nineteenth century. Thus, while I learned algebra from a book that required you to 'shew' things, I studied Vergil and Horace in the editions of Page. The Greek word for 'self-taught' is αυτοδιδακτος. A great Belfastman, C S Lewis, once said that of all writers he made least claim to be αυτοδιδακτος, and I want to echo his words. It seems to me unlikely that the tuition which I received in French and German literature could have been bettered anywhere in the world at that time.

One day I came across the writings of Ivan N Panin (1855-1942). The said Panin was born in Russia, where as a young man he took part in political conspiracies. He emigrated to Germany, and eventually made his way to the USA. Panin entered Harvard in 1878. For a while he lectured on Russian literature. After becoming a Christian, Panin studied numerical patterns in the Hebrew and Greek texts of the Bible for more than fifty years. Much of his analytical technique can be seen as founded upon a very old Jewish tradition. Ivan Panin was a man of prodigious diligence who became the best-known gematrist in modern history.

I reckon that Panin had an inordinate affection for the number seven, and I abhor his notion of numerical 'neighbours', but his tract on Genesis 1. 1 did a lot to nourish my interest in gematria. If you find Panin's works hard to obtain through the usual channels, you should contact Mr John W Irwin, 81 Bayview Ridge, Toronto, Ontario, M2L 1E3, Canada (Jirwinc617@rogers.com). And whether or not you decide to read what Panin has written, there are two books that you ought to buy. One is *Numerical Secrets of the Bible*, by Casper J Labuschagne (BIBAL Press: North Richland Hills, Texas, 2000). The other is *The Bible Wheel*, by Richard Amiel McGough (Bible Wheel House, California, 2007: to order it, contact richard@biblewheel.com). Richard's book should be in every home.

Music, mathematics, and literature come together in *The Pythagorean Plato*, by Ernest G McClain (York Beach, Maine, 1984). When I bought this book in 1989 I didn't know that Prof. McClain, who is one of the most significant thinkers of our age, would become one of my best friends. Ernest's unparalleled erudition is complemented by his common-sense wisdom. He hates every form of gematric excess. In fact, he hates most gematria. My thanks are due to Ernest for his instruction, for his encouragement, and above all for his regular bursts of gunfire. Over and over again he has shot my numerical fancies down in flames. Ernest may feel like describing my book in Callimachean language as $\mu\epsilon\gamma\alpha\ \kappa\alpha\kappa\omicron\nu$ (= a big nuisance), but without him it would have been much worse.

Another close friend has been Prof. Duane L Christensen, who along with his wife Martha has come over from the USA to stay with me in Northern Ireland on three separate occasions. The world is a small place. In 2008 Duane and I managed to be collegial presenters of papers at academic conferences first in New Zealand, and then in England! (Duane's first visit to Ulster was partly born of a desire to see the hexagonal basalt columns of the Giant's Causeway, which I had mentioned during an online discussion of centred hexagonal numbers. Do

you perceive how powerful numbers can be?) I'm grateful to Duane, who is President of BIBAL Corporation, for allowing my book to go out under the BIBAL imprint. Why is *THE LORD SHALL COUNT* being published on the internet? Because we reckon that few people will want to pay for an A4-sized paperback of 720 pages. Nonetheless, in case either individuals or institutions prefer to have the book in physical form, we are going to publish a limited hard-copy edition of *THE LORD SHALL COUNT* in the UK, and we shall respond merrily to any such demand for hard copies as may arise in the USA or elsewhere.



A very old postcard of the Giant's Causeway

Duane is an eminent Hebraist, a prolific author, and my main academic creditor. It has been at his bidding that I have abandoned the habit of take-it-or-leave-it brevity. Over the last few years he has gently exhorted me both to tell the story simply, and to tell the story slowly. He has also taught me an enormous amount about the centricity of Hebrew poetry.

Mr Noel Dornan, my friend for more than three decades, has taught me an equal amount about mathematics. Noel communicates his love of numbers with a selfless patience. He is always susceptible to numerical beauty, for he has never lost the ability to marvel. I owe him a great deal.

At sundry times and in divers manners I have been helped by Mr Richard Abbott, Mr Austen Alexander, Miss Alison Campbell, Mr Bryan Carr, Mr Leon Crickmore, Mr Michael Davies, Mr Pete Dello, Mr David Farrell, Dr Irving Finkel, Dr Rashid Hanif, Dr John Holthouse, Mr James Jobe, Frú Helga Jóhannsdóttir, Dr Bradley Lehman, Dr Henrik Mann, the late Dr James W McMillan, Mr Ivan Rankin, Dr Howard Schatz, Dr Kiran Swain, Mr Anthony Thompson, Hr. Gunnar Tómasson, and Mr Rudi Voigt, as also by Dr John Purser, who together with his wife Barbara has eaten an Ulster Fry, and lived.

Some years ago my old friend Prof. K O Lee kindly read an article of mine relating to musical physics. Later he sent me a copy of Stuart Isacoff's *Temperament* (New York, 2001). One reference in that work caused the seed of my own book to germinate, but KO should not rebuke himself unduly.

Mr William Hill worked with considerable diligence to create the music examples that appear in chapters 14, 15, 16, and 17.

My friend Miss Georgia Durante, author of *The Company She Keeps*, and most famous of all Kodak Summer Girls, took the trouble to scrutinize the true story which is told in chapter 12.

Hr. Pétur Halldórsson, who combines the professions of artist and author, has done me a notable service by designing the cover.

Some bits of my own writing appear in print here for a second time. I'm grateful to Prof. Robin Osborne for letting me include in chapter 12 two sets of parodic verse that were published years ago in *Omnibus*, as also to Dr John Harris for allowing me to incorporate in chapter 31 an article abstract based on 'Old King Cole' and a poem entitled 'The Shulamite' which have appeared in recent issues of *Praesidium*. Chapters 14, 15, 16, and 17 contain a lot of material that was published in *FoMRHI Quarterly* between 1994 and 1996 (see www.fomrhi.org). Let me thank the current editor of that quarterly, Mr Christopher Goodwin, whose courtesy makes it possible for me to use this material once again. Chapter 19 is based on an addendum which I contributed to Duane L Christensen's *Reading Genesis 1-2 in Hebrew* (Bibal Corporation: Rodeo, California, 2005).

Extracts from the Authorized Version of the Bible (the King James Bible), the rights in which are vested in the Crown, are reproduced by permission of the Crown's Patentee, Cambridge University Press. The single verse of Yakut which appears on page 458 is taken from a publication of the Institute for Bible Translation, Russia / CIS.

In 1989 I began to find musical cryptograms in the Old Testament, and shared my findings with a number of other scholars. It was natural for me to consult my old Latin tutor, Prof. Mary Smallwood, who aside from being a musician was a leading authority on Judaeo-Roman history. She advised me to keep going. Her advice sustained me in the following year, when a quintet of academic anchorites accused me of having 'invented a lunatic language'. Then in 1991 I was given a very fair hearing by Prof. József Schweitzer, Chief Rabbi of Hungary, and Rector of the Jewish Theological Seminary in Budapest. That Prof. Schweitzer combines an even-minded rationality with a formidable acuity is widely known. I was fortunate to receive his counsel.

Nowadays people tend not to accuse me of creating lunatic languages. Chapter 14 is partly based on a paper entitled 'The Scale of the Psalter' which I presented in the British Museum at the 2008 International Conference of Near Eastern Archaeomusicology. Chapter 15 is partly based on a paper entitled 'The Davidic System of Musical Notation' which I presented in the University of Tartu, Estonia, at the 2010 International Meeting of the Society of Biblical Literature.

Let me mention two generous friends who have died. One of them came from the land of ice and fire. If people sign up for a long voyage of discovery, they must possess what the Hungarian poet Endre Ady calls *Szívük izzik, agyuk jégcsapos* (= Hearts of fire, brains of ice). Furthermore, they must accept without fear what Njál says in the Icelandic saga that bears his name.

Kemsk, þó at seint fari (= Everything comes to pass, although it takes time).

My own voyage has taken a long time. I began to study the language and medieval literature of Iceland when I was still at school. Years passed before I thought of asking whether Iceland had any medieval *music* of her own. Prof.

Hallgrímur Helgason, a well-known composer and scholar, acquainted me with the corpus of early Icelandic music. He also cast a kindly eye over my austere essays in counterpoint. Neither of us knew that my studies in the music of medieval Iceland would lead me back to the music of ancient Israel, and to gematria. Such a journey may strike some readers as rather unlikely, but then the Giant's Causeway is rather unlikely, and while the source named Q does not exist, the Giant's Causeway does.

Life can be an interesting business. My other friend was a great Irishman whose name was Cecil Harmsworth King. (His father was Professor of Oriental Languages at Trinity College, Dublin, and his father-in-law was Regius Professor of Hebrew at Oxford.) From him I learned a lot about how to write, and much besides. When I was a younger man, in the days before gerbil-bred conspiracy theories, Cecil King was good enough to treat me as his unofficial grandson. He himself had always been mightily involved in British politics, and he wanted me to pursue a political career, so he read some of my scholarly publications with undisguised impatience.

Over breakfast one morning he fixed me with a Socratic stare, and asked, 'Can you think of a single academic author who ever achieved high office?'

'Woodrow Wilson,' I muttered, with no thought of *thirteen letters* in my head.

'That was a perfectly appalling example,' said King.

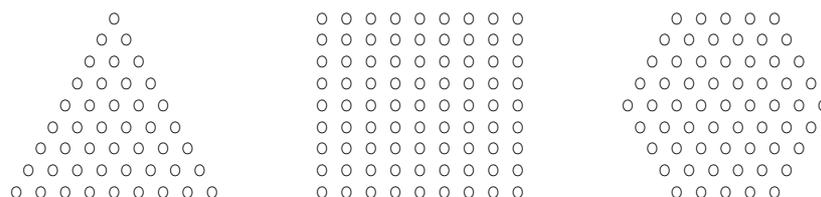
(Let me try again. Three years after King's death, the musicologist Vytautas Landsbergis would become Chairman of the Supreme Council of Lithuania.)

While Cecil King disliked the shallowness of modern culture, he expected authors to express themselves with complete clarity. Presently I have in front of me a long letter in which King tells me how to go about writing a book. Near the end of his letter he says,

You have to accept that no reader knows anything.....

As I read those words today I smile, and salute the memory of a well-intentioned mentor. But I can't believe that 'no reader knows anything'. The fact that you're reading *THE LORD SHALL COUNT* with an open mind makes me think that you have both a knowledge of the Bible, and an interest in its message. Another fact brings me no pleasure at all. Nearly every chapter of my book will turn out to be a mirror in which deluded numerologists will behold themselves and their own obsessions. Some of them will even find 'significance' in the book's 720 pages!

You must by now be rather tired of hearing about *me*, so let's get down to work. We'll begin by looking at figurate numbers.



Please don't be expecting beautiful artistic graphics. The triangle, the square, and the hexagon that appear above were created at the keyboard. So was the hexagon which appears on page 3. And I've used the keyboard to create all of

the figurate numbers that follow. The idea is that you'll be able to replicate them at your own keyboard, without needing to employ any fancy programs. You'll find it helpful to use a typewriter font like Courier New, in which the same width is accorded to every character.

You can also draw figurate numbers by hand on unlined paper. Or you can follow the example of someone who lives near me. Having once changed five dollars into cents, she builds figurate numbers with the coins on a table-top.

On a good day you can work in the open air with pebbles on the ground, as I did one afternoon by the seashore with Duane and Martha Christensen. The use of pebbles will help you to realize that even the most Protean numbers are REAL THINGS. It may also help to protect you from cloudy feelings. Never imagine that the contemplation of mist and steam will make you wise. Do you find the man who preaches undefinable 'significance' hard to understand? Rejoice! As Nietzsche would say,

Ich -- hüte mich, ihn zu verstehn (= I beware of understanding him).

Here is a sad fact. THERE IS NO LIMIT TO HUMAN CREDULITY. Look at what came up on my computer-screen a while ago.

Purchase CodeFinder Millennium Edition today and begin your own exploration into the extraordinary world of the Bible Codes. Finally answer the question: "Is my name in the Bible Codes?".

Yes, it is, in effect. All have sinned, and come short of the glory of God.

Eight words of the Maltese poet Pietru Caxaro, who died in 1485, will serve to rebuke dreamers like your four credulous friends.

fen timayt insib il gebel sib tafal morchi

(= where I hoped to find the rock, I found loose clay).

It is the hard, granitic, and uncompromising nature of REAL THINGS that makes them able to form genuine relationships. G K Chesterton writes,

A man might work out the whole of mathematics with a handful of pebbles, but not with a handful of clay which was always falling apart into new fragments, and falling together into new combinations.

St Jude calls certain dreamers νεφελαι ανυδροι (= clouds without water), but St Peter describes his fellow-Christians as λιθοι ζωντες (= lively stones).

There is a great health about working with pebbles in the open air.

One of Shakespeare's notably salubrious characters is prepared to find 'sermons in stones', and 'books in the running brooks'.

So is the Chinese poet Han Yu.

當 流 赤 足 躅 澗 石

(I choose to tread barefoot on the pebbles of a lively mountain stream).....

人 生 如 此 自 可 樂

.....(= If a man has these real things, he can live a happy life).

Cultivate the outdoor world, and do your best to avoid the company of abstract nouns. The French poet Victor de Laprade can hear *sur les cailloux le bruit clair du ruisseau* (= the clear sound of a stream flowing over pebbles). By contrast, the Roman poet Ovid speaks of *incerto lapidosus murmure rivus* (= a pebble-bedded stream with a lilting song).

At times, when the mathematical song becomes a riddle, you'll want to ask the assemblers of pebbles a question which appears in Joshua 4. 6:

מה האבנים האלה לכם (= What mean ye by these stones?).

At other times you'll feel like the adventurer in John Buchan's *Huntingtower*.

The next moment he was stepping delicately on very sharp pebbles, holding on to the end of the scout's pole, while an icy stream ran to his knees.....

Fear not. The important thing is that you want to be an adventurer yourself. So tread barefoot on the numerical pebbles. If you take the trouble to look at them, you'll understand what the Russian poet Lermontov means when he says,

Звонко-бегущие ручьи

Musical streams run

По дну из камней разноцветных.....

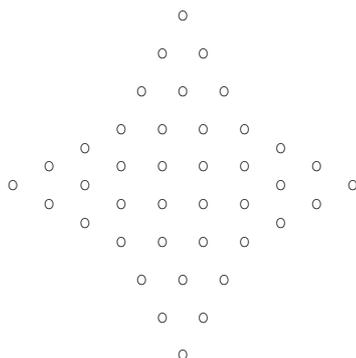
Over beds of multicoloured pebbles.

The Venezuelan poet Eugenio Montejo once promised to write his name *con líneas de guijarros* (= with lines of pebbles). In chapter 3 you'll learn how to encode your own name, and a number of other words, in rows of pebbles.

You yourself will not become *een blauwe kiezelsteen* (= a blue pebble), like the hero of a celebrated Dutch poem.

But before long certain gemmeous numbers will become for you what Egil Skallagrímsson, the Icelandic Samson, calls *haukstrandar möl* (= pebbles that adorn the hand).

Do you recall how Jonah said, *Yet FORTY days?* Well, the number FORTY has a shape. Read on, and be prepared for what you read to have a shape! Certain parts of a discursive treatise have to be cast in fictional form. That's a fact.



CHAPTER 2: SMOOTH STONES OUT OF THE BROOK

霜 皮 溜 雨 四 十 圍

(= Frosted bark, lacquered with rain. Forty people to span it!)

Cen Can, 'The Old Cypress'

I have counted forty stars, and I am tired.

Rudyard Kipling, 'Without Benefit of Clergy'

It was Solomon who said, 'Thy cheeks are comely with rows of jewels.' Keep 'rows of jewels' in mind as you look at these five triangular numbers.



The triangular series runs *one, three, six, ten, fifteen*, and so on.

(You see the fifteen every time you play a game of pool.)

Triangular numbers have the formula n^2 plus n , all over 2.

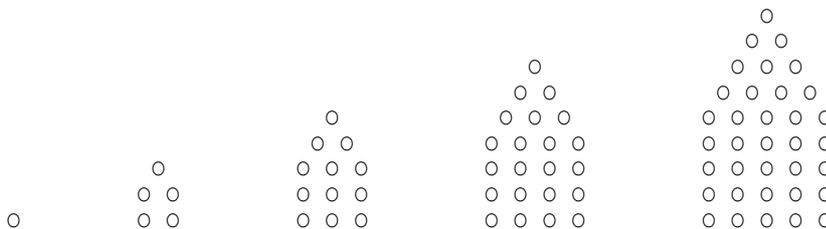
Now look at these five square numbers.



The square series runs *one, four, nine, sixteen, twenty-five*, and so on.

Square numbers have the formula n^2 .

Now look at these five pentagonal numbers.

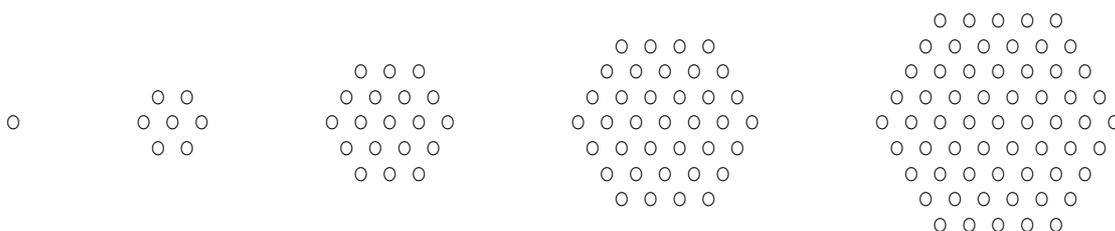


The pentagonal series runs *one, five, twelve, twenty-two, thirty-five*, and so on.

Pentagonal numbers have the formula $3n^2$ minus n , all over 2.

(You can see how the pentagonal number of n consists of a square of n with a triangle of n minus 1 set on one of its sides.)

Now look at these five centred hexagonal numbers.



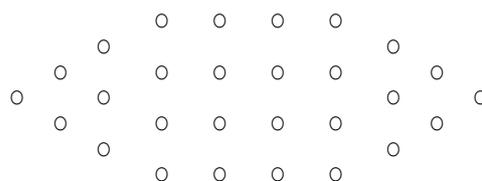
The centred hexagonal series runs *one, seven, nineteen, thirty-seven, sixty-one*, and so on.

Centred hexagonal numbers have the formula $3n^2$ minus $3n$ plus 1 .

We must take care to distinguish the ‘centred hexagonal numbers’ from what we shall call the ‘long hexagonal numbers’.

The long hexagonal number of n consists of a square of n with a triangle of n minus 1 set on each of two sides.

Here’s the long hexagonal number of four, which is twenty-eight.



Long hexagonal numbers have the formula $2n^2$ minus n .

The long hexagonal series runs *one, six, fifteen, twenty-eight, forty-five*, and so on.

Any long hexagonal number is also the triangular number of an odd number.

One, six, fifteen, twenty-eight, and forty-five are respectively the triangular numbers of one, three, five, seven, and nine.

1 3 6 10 15 21 28 36 45

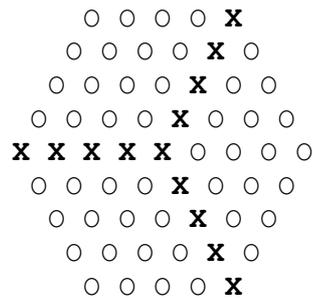
The long hexagonal number of n is always the same as the triangular number of *two n minus 1*. Let me add that we have three good reasons for calling the long hexagonal numbers LONG. First, they are longer than they are broad. Secondly, they must be distinguished from the centred hexagonal numbers. Thirdly, authors who call them the ‘hexagonal numbers’, or the ‘proper hexagonal numbers’, or the ‘cornered hexagonal numbers’ tend to confuse their readers. Improper hexagonal numbers are a bit like cornerless hexagons: they don’t exist.

In time we’ll come to see that centred hexagonal numbers play a major rôle in Biblical mathematics. For the present, let me leave you with a useful aphorism. Last night my friend Jane Dascey came over to borrow an *er hu* (二胡: that is, a two-string Chinese violin whose hexagonal belly is made of snakeskin). She and I began to talk about figurate numbers. Here is what Jane said before she left. ‘Centred hexagonal numbers are the ones that look like proper hexagons.’

Notice that the cubes of positive integers (1, 8, 27, 64, 125, and so on) are linked to the centred hexagonal numbers (1, 7, 19, 37, 61, and so on). The cube of n is always the sum of the first n centred hexagonal numbers.

$$1 \quad 1 + 7 = 8 \quad 1 + 7 + 19 = 27 \quad 1 + 7 + 19 + 37 = 64 \quad 1 + 7 + 19 + 37 + 61 = 125$$

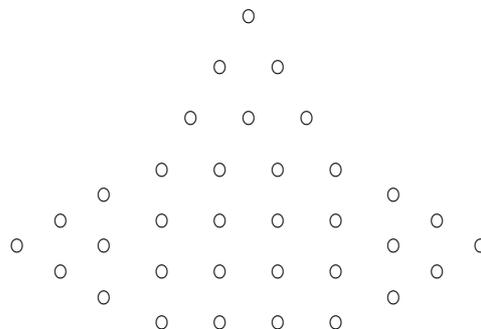
You can discern another link merely by using your eyes. Imagine that a given centred hexagonal number is a clock-face. Then connect its central counter with the counters which represent one o'clock, five o'clock, and nine o'clock.



The hexagon is one of the most important shapes in creation. It can be seen as connecting the second dimension with the third dimension.

Let us go on to look at the *heptagonal* numbers. The heptagonal number of n consists of a square of n with a triangle of n minus 1 set on each of three sides.

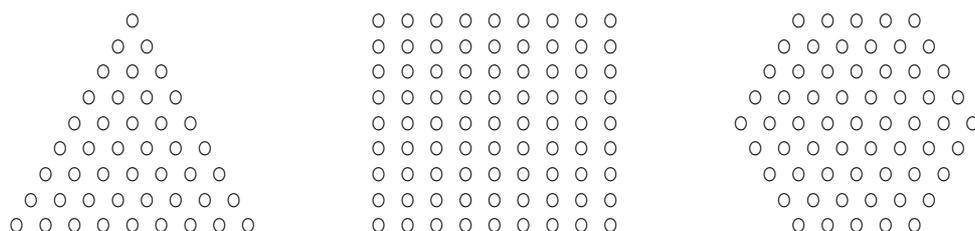
Here's the heptagonal number of four, which is thirty-four.



The heptagonal series runs *one, seven, eighteen, thirty-four, fifty-five*, and so on.

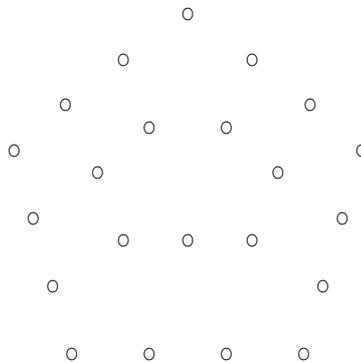
Heptagonal numbers have the formula $5n^2$ minus $3n$, all over 2.

The triangular, square, and centred hexagonal numbers arrange themselves naturally in accordance with the forms of regular polygons.



You'll find it impossible to arrange the pentagonal, long hexagonal, and heptagonal numbers in accordance with the forms of regular polygons, unless

you're prepared to do what certain mathematicians have done, and fill out your polygons with utterly inexplicable pockets of air. (Curious things happen in particular fields of service. I'll tell you a bizarre little anecdote about one of these mathematicians when we get to chapter 12.)

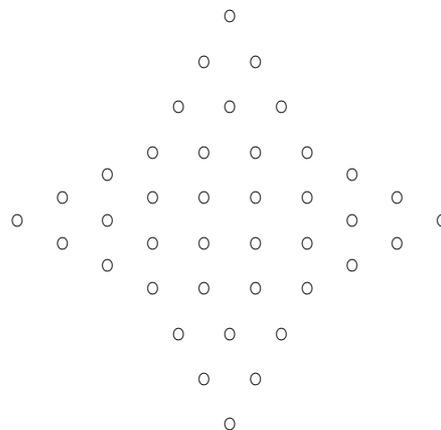


Anyway! We'll move on now to consider figurate numbers which are based on polygons having eight or more sides.

The octagonal number of n consists of a square of n with a triangle of n minus 1 set on each of its four sides.

Because octagonal numbers of this form look like four-pointed stars, they are called 'stellate numbers' (Latin *stella* = 'star').

Here's the octagonal number of four, which is forty.

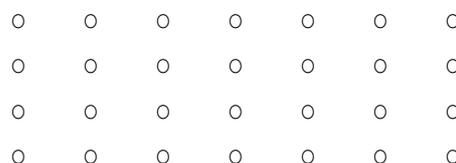


The stellate series runs *one, eight, twenty-one, forty, sixty-five*, and so on.

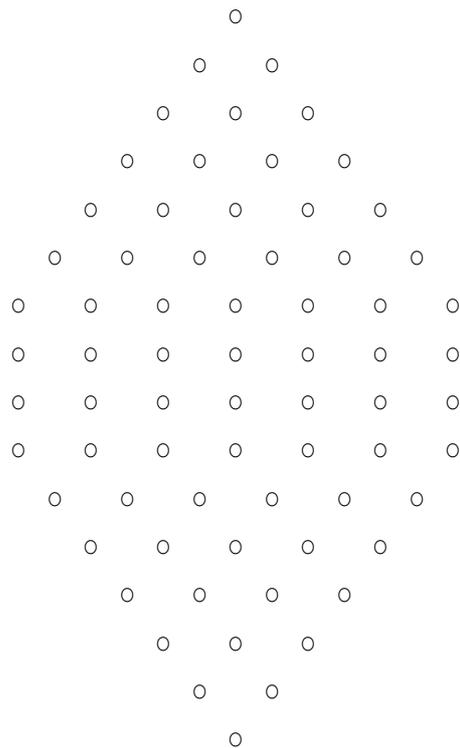
Stellate numbers have the formula $3n^2$ minus $2n$.

Is it possible to compose octagonal numbers which 'look like proper octagons'? Yes, certainly! Let's compose the 'proper' octagonal number based on $n = 4$.

First, we construct a rectangle having a long side of $2n$ minus 1 and a short side of n .

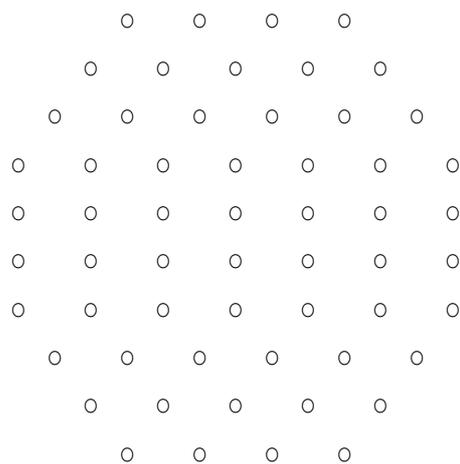


Secondly, we set a triangle of $2n$ minus 2 on each long side of the rectangle.



Thirdly, we remove a triangle of n minus 1 from each triangle of $2n$ minus 2.

That double act of amputation gives us what we'll call the 'proper octagonal' number of four, which is fifty-eight.



The 'proper octagonal' series runs *one, ten, twenty-nine, fifty-eight, ninety-seven*, and so on.

Proper octagonal numbers have the formula $5n^2$ minus $6n$ plus 2.

You can build the nonagonal number of n by setting a triangle of n minus 1 on each 'under arm' of the heptagonal number of n .

The nonagonal series runs *one, nine, twenty-four, forty-six, seventy-five*, and so on.

Nonagonal numbers have the formula $7n^2$ minus $5n$, all over 2.

You can build the decagonal number of n by setting a triangle of n minus 1 on each 'under arm' of the stellate number of n .

The decagonal series runs *one, ten, twenty-seven, fifty-two, eighty-five*, and so on.

Decagonal numbers have the formula $4n^2$ minus $3n$.

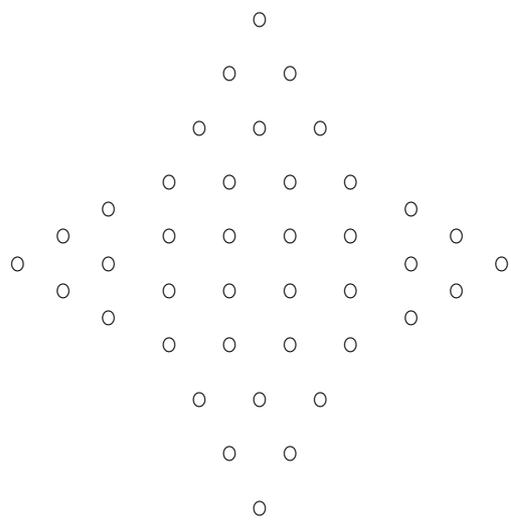
By setting a triangle of n minus 1 on either side of each 'arm' of the heptagonal number of n , you'll be able to build what is called the hendecagonal (= eleven-sided) number of n .

The hendecagonal series runs *one, eleven, thirty, fifty-eight, ninety-five*, and so on.

Hendecagonal numbers have the formula $9n^2$ minus $7n$, all over 2.

By setting a triangle of n minus 1 on either side of each 'arm' of the stellate number of n , you'll be able to build the square-based dodecagonal (= twelve-sided) number of n , which we're going to ignore altogether in favour of its hexagon-based cousin.

Think of stars. You remember how we built the stellate number of n by setting a triangle of n minus 1 on each side of a square of n .

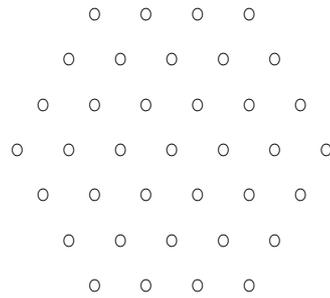


That gave us a *four*-pointed star. If you set a triangle of n minus 1 on each side of the proper octagonal number of n , you get an *eight*-pointed star. Let $n = 7$, and try it!

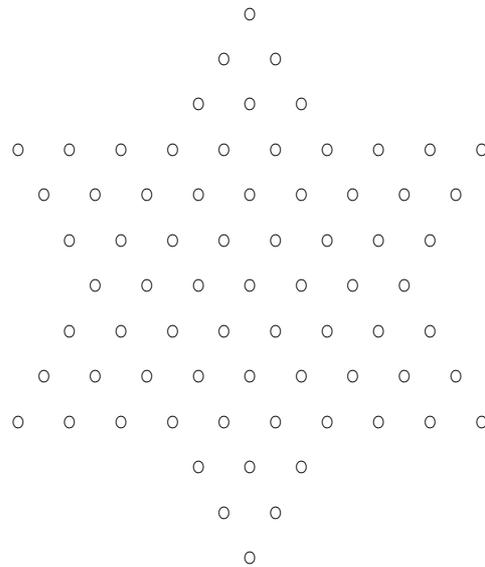
How do we get a *six*-pointed numerical star?

By setting a triangle of n minus 1 on each side of the centred hexagonal number of n .

Take thirty-seven, the centred hexagonal number of four.



Then set a triangle of three on each side of the hexagon, thus:



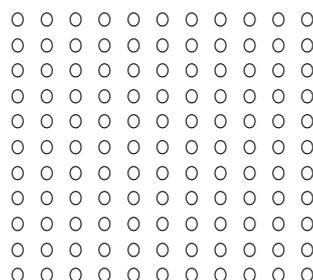
That gives us the *dodecagonal number* of four, which is seventy-three.

(To call it a ‘star of David’ is to use an unBiblical expression.)

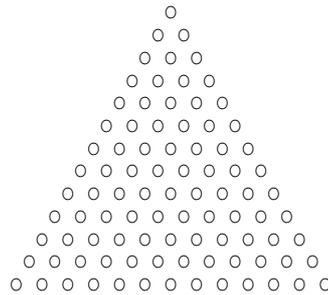
The hexagon-based dodecagonal series runs *one, thirteen, thirty-seven, seventy-three, one hundred and twenty-one*, and so on.

Hexagon-based dodecagonal numbers have the formula $6n^2$ minus $6n$ plus 1 .

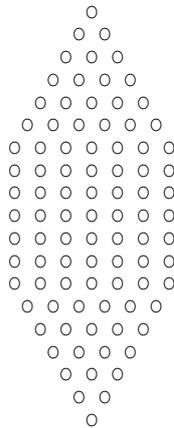
Not long ago I used the word *Protean*. You can see how a number may have more than one figurate personality. The hexagon-based dodecagonal number of five is one hundred and twenty-one, which is also the square of eleven.



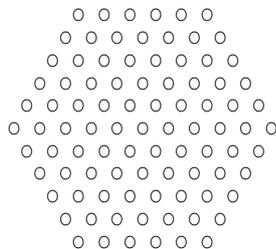
Ninety-one is the triangular number of thirteen.



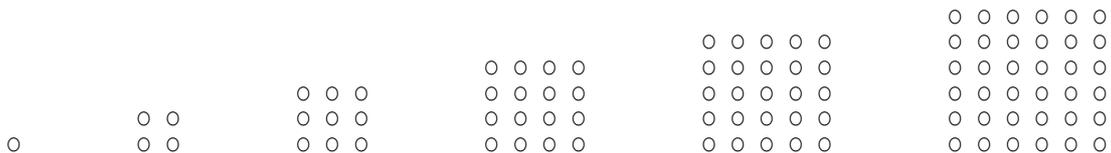
Ninety-one is also the long hexagonal number of seven.....



.....and the centred hexagonal number of six.



All the numbers that we've talked about so far are TWO-dimensional numbers. But ninety-one becomes a THREE-dimensional number when the square numbers are stacked consecutively on top of each other to give a pyramid.



Are you growing weary? Then let me make you very happy. From now on we shall have little to say about the nonagonal, decagonal, and hendecagonal numbers. We shall largely ignore the long hexagonal and heptagonal numbers. To pentagonal, stellate, proper octagonal and dodecagonal numbers we shall not refer very often. The figurate numbers which will most engage our attention are the triangular, square, and centred hexagonal numbers.

For your interest, and for your later reference, I'll set down below a short glossary containing more than five hundred figurate numbers. The Chinese poet Wang Wei has provided us with a healthy outdoor epigraph.

清 泉 石 上 流

(= Clear streams flow over the stones).

The first sixty-six triangular numbers

1, 3, 6, 10, 15, 21, 28, 36, 45, 55, 66, 78, 91, 105, 120, 136, 153, 171, 190, 210, 231, 253, 276, 300, 325, 351, 378, 406, 435, 465, 496, 528, 561, 595, 630, 666, 703, 741, 780, 820, 861, 903, 946, 990, 1035, 1081, 1128, 1176, 1225, 1275, 1326, 1378, 1431, 1485, 1540, 1596, 1653, 1711, 1770, 1830, 1891, 1953, 2016, 2080, 2145, 2211

The first fifty-five square numbers

1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225, 256, 289, 324, 361, 400, 441, 484, 529, 576, 625, 676, 729, 784, 841, 900, 961, 1024, 1089, 1156, 1225, 1296, 1369, 1444, 1521, 1600, 1681, 1764, 1849, 1936, 2025, 2116, 2209, 2304, 2401, 2500, 2601, 2704, 2809, 2916, 3025

The first forty-five pentagonal numbers

1, 5, 12, 22, 35, 51, 70, 92, 117, 145, 176, 210, 247, 287, 330, 376, 425, 477, 532, 590, 651, 715, 782, 852, 925, 1001, 1080, 1162, 1247, 1335, 1426, 1520, 1617, 1717, 1820, 1926, 2035, 2147, 2262, 2380, 2501, 2625, 2752, 2882, 3015

The first forty-five centred hexagonal numbers (= 'proper hexagons')

1, 7, 19, 37, 61, 91, 127, 169, 217, 271, 331, 397, 469, 547, 631, 721, 817, 919, 1027, 1141, 1261, 1387, 1519, 1657, 1801, 1951, 2107, 2269, 2437, 2611, 2791, 2977, 3169, 3367, 3571, 3781, 3997, 4219, 4447, 4681, 4921, 5167, 5419, 5677, 5941

The first forty-five long hexagonal numbers

1, 6, 15, 28, 45, 66, 91, 120, 153, 190, 231, 276, 325, 378, 435, 496, 561, 630, 703, 780, 861, 946, 1035, 1128, 1225, 1326, 1431, 1540, 1653, 1770, 1891, 2016, 2145, 2278, 2415, 2556, 2701, 2850, 3003, 3160, 3321, 3486, 3655, 3828, 4005

The first forty-five heptagonal numbers

1, 7, 18, 34, 55, 81, 112, 148, 189, 235, 286, 342, 403, 469, 540, 616, 697, 783, 874, 970, 1071, 1177, 1288, 1404, 1525, 1651, 1782, 1918, 2059, 2205, 2356, 2512, 2673, 2839, 3010, 3186, 3367, 3553, 3744, 3940, 4141, 4347, 4558, 4774, 4995

The first forty stellate numbers (= four-pointed stars)

1, 8, 21, 40, 65, 96, 133, 176, 225, 280, 341, 408, 481, 560, 645, 736, 833, 936, 1045,
1160, 1281, 1408, 1541, 1680, 1825, 1976, 2133, 2296, 2465, 2640, 2821, 3008, 3201,
3400, 3605, 3816, 4033, 4256, 4485, 4720

The first forty proper octagonal numbers

1, 10, 29, 58, 97, 146, 205, 274, 353, 442, 541, 650, 769, 898, 1037, 1186, 1345, 1514,
1693, 1882, 2081, 2290, 2509, 2738, 2977, 3226, 3485, 3754, 4033, 4322, 4621, 4930,
5249, 5578, 5917, 6266, 6625, 6994, 7373, 7762

The first forty nonagonal numbers

1, 9, 24, 46, 75, 111, 154, 204, 261, 325, 396, 474, 559, 651, 750, 856, 969, 1089, 1216,
1350, 1491, 1639, 1794, 1956, 2125, 2301, 2484, 2674, 2871, 3075, 3286, 3504, 3729,
3961, 4200, 4446, 4699, 4959, 5226, 5500

The first forty decagonal numbers

1, 10, 27, 52, 85, 126, 175, 232, 297, 370, 451, 540, 637, 742, 855, 976, 1105, 1242, 1387,
1540, 1701, 1870, 2047, 2232, 2425, 2626, 2835, 3052, 3277, 3510, 3751, 4000, 4257,
4522, 4795, 5076, 5365, 5662, 5967, 6280

The first forty hendecagonal numbers

1, 11, 30, 58, 95, 141, 196, 260, 333, 415, 506, 606, 715, 833, 960, 1096, 1241, 1395,
1558, 1730, 1911, 2101, 2300, 2508, 2725, 2951, 3186, 3430, 3683, 3945, 4216, 4496,
4785, 5083, 5390, 5706, 6031, 6365, 6708, 7060

The first forty hexagon-based dodecagonal numbers (= six-pointed stars)

1, 13, 37, 73, 121, 181, 253, 337, 433, 541, 661, 793, 937, 1093, 1261, 1441, 1633, 1837,
2053, 2281, 2521, 2773, 3037, 3313, 3601, 3901, 4213, 4537, 4873, 5221, 5581, 5953,
6337, 6733, 7141, 7561, 7993, 8437, 8893, 9361

Now Delia, my next-door neighbour, wants to point out two facts. First, the glossary contains five hundred and forty-one numbers. Secondly, 541 is the six-pointed star number of ten.

Is that too recondite a note to stop on? Then we'll allow the Chinese poet Li Bai to have the last word.

曲 盡 河 星 稀

(= We ended our song as the stream of stars faded).

CHAPTER 3: LET LETTERS BE GIVEN ME

行 到 中 庭 數 花 朵

(= As she walks to the central courtyard, she counts the clusters of flowers).

Liu Yuxi

.....will you with counters sum
The past proportion of his infinite?

William Shakespeare, *Troilus and Cressida*

Straight in! We're going to play didactic games with a numerical ENGLISH alphabet of units, tens, and hundreds.

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9

J = 10, K = 20, L = 30, M = 40, N = 50, O = 60, P = 70, Q = 80, R = 90

S = 100, T = 200, U = 300, V = 400, W = 500, X = 600, Y = 700, Z = 800

In our culture letters are letters, and numbers are numbers. Or so it seems.

The literal 'Guelfs' have no dealings with the numerical 'Ghibellines', so long as everything stays simple.

There are many times in life when a number is enough.

At such times you can say, 'Turn to paragraph 4 of the document.' In the same way examiners can say,

Candidates should answer any FOUR questions.

Once you introduce the least element of complexity, as for example by dividing large sections of a document into smaller sections, everything changes.

As soon as you say, 'Turn to paragraph 4, section d,' **YOU ARE USING THE ALPHABET NUMERICALLY.**

Examiners are doing the same thing when they say,

Candidates should answer either part A or part B of question 4.

In the ancient Hebrew and Greek alphabets, letters were letters, and letters were also numbers. It's easy to use the English alphabet in the same way.

Of course most ordinary people are able to keep the two forms of the alphabet in separate mental compartments.

But creative people are different.

Creative people ask, 'What if.....?'. They perform experiments. Such people eventually find the two forms of the alphabet interacting in their own wakeful minds. Before long they begin to add up the numerical letters of individual words. Why? Because *they want to see what happens*.

Don't think that these creative people start by adding up dull official words like DOCUMENT or EXAMINER. They often start by adding up their own names.

(But hark! My doorbell announces the advent of an Australian art student called Julia Arden. The said Julia has come to see me at the suggestion of Jane Dascey, who recently borrowed my *er hu*. Next year Julia intends to paint two dozen semi-abstract canvases on the theme of 'The Shulamite', and she wants to incorporate a 24-line poem in her work. Will I please write her a suitable poem? Before she leaves, Julia asks to see my collection of musical instruments.)

Once you get used to the idea of adding up words of ancient Hebrew, you begin to wonder about the numerical *English* alphabet. May it be used for something more interesting than a legal document, or an exam paper? And what happens if you add up the letters of your own name?

One April afternoon, you start. Your surname happens to be FOX.

Now FOX wouldn't have been your first choice, if you'd been allowed any say in the matter, but you'd rather be called FOX than HIPPOPOTAMUS or SKUNK.

The good thing about the name FOX is that it contains only three letters, so it won't take you long to add it up. (Be grateful that you're not called WILAMOWITZ-MOELLENDORFF. There are as many letters in that famous name as there are letters in the Hebrew alphabet.)

Anyway! You write out the numerical English alphabet of units, tens, and hundreds.

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9

J = 10, K = 20, L = 30, M = 40, N = 50, O = 60, P = 70, Q = 80, R = 90

S = 100, T = 200, U = 300, V = 400, W = 500, X = 600, Y = 700, Z = 800

Now you can add up the three letters of your own surname.

F = 6, O = 60, and X = 600.

$6 + 60 + 600 = 666$

As soon as you see the total, you groan.

You're a very different character from Pierre in Tolstoy's *War and Peace*. It pleases you not at all to discover that your vulpine surname adds up to 666. You remember Revelation 13. 18.

Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of a man; and his number is Six hundred threescore and six.

Synecdoches of Schenectady! It's bad enough having to bear the name of an animal without being, so to speak, *the Beast*.

Do you know anyone with a faintly vegetal or mineral surname?

Yes, you do. Your girlfriend is called ROSIE STONE. Rosie works as an artist, but her interests include literature and heraldry. (Long ago Rosie's father persuaded me to start painting. On that account an obscure feminist broadsheet recently accused him of committing a crime against humanity. I was bemused.)

Since you want to distinguish the one whom you love from the monstrous regiment of other Rosies, you decide to compute the total of her TWO names.

$$R = 90, O = 60, S = 100, I = 9, \text{ and } E = 5.$$

$$S = 100, T = 200, O = 60, N = 50, \text{ and } E = 5.$$

How does all that add up?

$$[90 + 60 + 100 + 9 + 5] + [100 + 200 + 60 + 50 + 5] = 679$$

Innocent enough, you think.

Then you remember that your beloved was actually christened ROSA DARTE STONE. Setting aside for today the name DARTE, you decide to add up the two names ROSA and STONE.

$$R = 90, O = 60, S = 100, \text{ and } A = 1.$$

$$S = 100, T = 200, O = 60, N = 50, \text{ and } E = 5.$$

$$[90 + 60 + 100 + 1] + [100 + 200 + 60 + 50 + 5] = 666$$

What-ho! You don't know whether to be pleased or not. The numerical value of ROSA STONE is equal to the number of the Beast. That's pretty bad. It's also equal to the numerical value of FOX. That's pretty good.

Maybe the non-Beastly meaning of the identical numbers is that you and Rosa Stone are TWIN SOULS.

(Must say I like the idea of TWIN SOULS. I mean to say, DAVID CROOKES adds up to 756, and so does the celebrated actress JEANNE ROQUES, who died in 1957.)

Time passes. A fine spring afternoon turns into a very wet evening. After dinner your beautiful girlfriend calls round to see you. Proudly you tell her about the numerical work that you've been doing.

At first Miss Stone listens to you with some amusement. Once you get on to the TWIN SOULS bit, she begins to look nervous.

'Two years ago, a certain art lecturer asked me out for dinner,' says Rosie. 'Your four mad friends all know and revere him, dear. Anyway, the man told me with awful solemnity that *he was a vampire*. Then he tried to convince me that I was a vampire as well. I didn't go out with him again.' She pauses. 'Now then, Mr Fox. Have you anything more to tell me about numbers?'

'No,' you reply.

'That's good,' says Rosie. 'Listen, Whittaker. I brought you round an old film called *Arabian Nights*. Let's watch it now.'

Well, you agree to watch the film. Anything for a quiet life. But while your eyes are on the screen, your mind is yearning to engage in arithmetic. For no reason you remember the phrase **AND GESHEM THE ARABIAN** from Nehemiah 6. 1. How might the Hebrew words represented by that English phrase add up in the Hebrew alphabet? Reluctantly you decide to leave Geshem for another day.

Then a merry thought comes into your mind. You can work secretly in English!

How does the numerical alphabet run?

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9

J = 10, K = 20, L = 30, M = 40, N = 50, O = 60, P = 70, Q = 80, R = 90

S = 100, T = 200, U = 300, V = 400, W = 500, X = 600, Y = 700, Z = 800

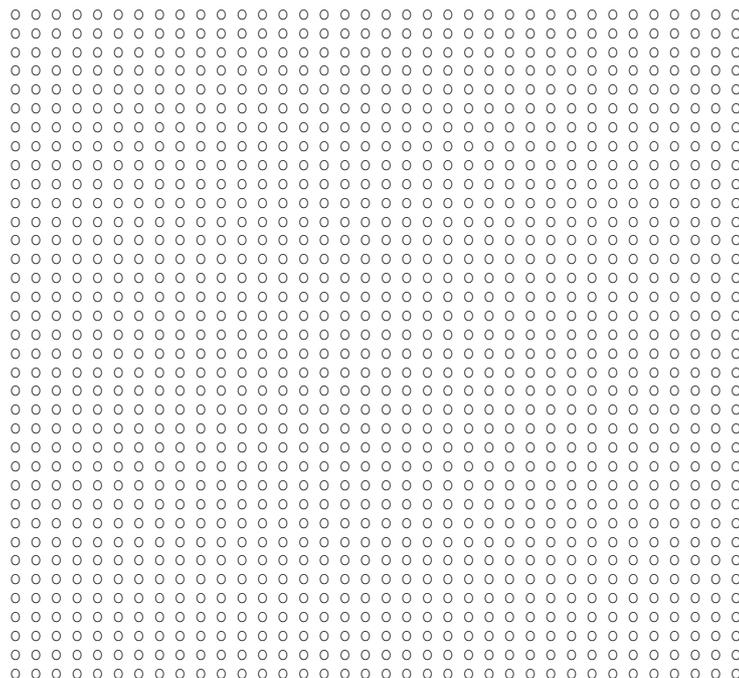
And who takes the rôle of Scheherazade in *Arabian Nights*? **MARIA MONTEZ**.

M = 40, A = 1, R = 90, I = 9, and A = 1.

M = 40, O = 60, N = 50, T = 200, E = 5, and Z = 800.

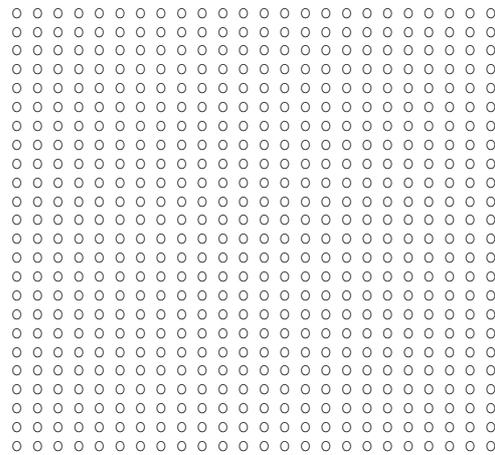
$[40 + 1 + 90 + 9 + 1] + [40 + 60 + 50 + 200 + 5 + 800] = 1296$

MARIA MONTEZ adds up to 1296, which is the **SQUARE** of thirty-six.



The word **SQUARE** adds up to 576, which is the square of twenty-four.

(It can't be anything more than a coincidence that your monitor-screen has a shorter side of five hundred and seventy-six pixels.)



$$S = 100, Q = 80, U = 300, A = 1, R = 90, \text{ and } E = 5.$$

$$100 + 80 + 300 + 1 + 90 + 5 = 576$$

Suddenly you become aware that Rosie isn't watching the film.

Your beloved has produced an ancient fashion magazine from her bag.

At the moment she's reading an article about a lady called *Claudia Schiffer*.

The magazine was published in 1993. Does Rosie intend to *paint* the lady? Last month some man paid her to paint Isolde Auld, the celebrated contortionist.

Your mind begins to work furiously.

$$C = 3, L = 30, A = 1, U = 300, D = 4, I = 9, \text{ and } A = 1.$$

$$S = 100, C = 3, H = 8, I = 9, F = 6, F = 6, E = 5, \text{ and } R = 90.$$

$$[3 + 30 + 1 + 300 + 4 + 9 + 1] + [100 + 3 + 8 + 9 + 6 + 6 + 5 + 90] = 575$$

CLAUDIA SCHIFFER adds up to 575.

You shiver. Only one less than the gematric value of SQUARE!

In a spirit of hilarity you close your eyes and try to think like four of your mad friends who believe that everything is related to everything else.

Is it possible for some of your numerical discoveries to combine themselves with the number of a year so as to create an important message?

1993 is the number of the year in which the magazine was published.

575 is the numerical value of CLAUDIA SCHIFFER.

1296 is the numerical value of MARIA MONTEZ.

1993 minus 575 minus 1296 leaves you with 122. What is significant about 122?

After two minutes of hard thinking, you discover something less than wonderful. 122 is the numerical value of the word BOO.

$$B = 2, O = 60, \text{ and } O = 60. \qquad 2 + 60 + 60 = 122$$

Oh, no. Your gematric bird of paradise has turned out to be an idiotic parrot, and as it falls to earth it squawks a derisive message. 'Boo!'

Then you realize that 122 is also the numerical value of the word GONE.

$$G = 7, O = 60, N = 50, \text{ and } E = 5. \qquad 7 + 60 + 50 + 5 = 122$$

You wonder if it is your own mind that is GONE. And now you remember the lunatic that Rosie was telling you about – the man who thought he was a vampire. Are *you* a vampire?

No, you're only a man who happens to like Louis Feuillade's greatest film. But what happens if you add up the sentence I AM A VAMPIRE?

You're becoming rather proficient at the business now.

$$9 + [1 + 40] + 1 + [400 + 1 + 40 + 70 + 9 + 90 + 5] = 666$$

Aaaagggghhhh! Forget about being twin souls. How are you going to tell the beautiful Rosie that she is Irma Vep, and that you are the Grand Vampire?



Jeanne Roques (= 756) as Irma Vep

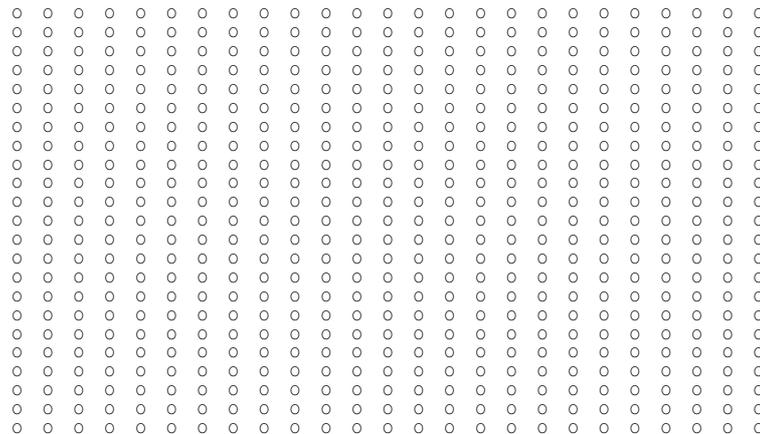
Time passes. One SUMMER morning you find yourself seated on a PEW in Rosie's church. An old lady is sitting on your left. Some agent of misery called Gideon Steyne comes up to give the obligatory 'children's talk' in his high-timbred voice. At once the old lady produces a novel from her handbag, and begins to read it. (*The Girl at Cobalt Creek*, by Margaret Way.) Once you realize that Mr Steyne is chiefly interested in oysters, you stop listening to him.

You wonder if you OUGHT to continue your studies in gematria. But having become addicted to the business, you can't stop!

The word SUMMER adds up to 575.

$$100 + 300 + 40 + 40 + 5 + 90 = 575$$

(Before your mental eyes, the number 575 represents itself figurately as a pulsating rectangle with a length of twenty-five and a breadth of twenty-three.)



The word PEW also adds up to 575.

$$70 + 5 + 500 = 575$$

So does OUGHT.

$$60 + 300 + 7 + 8 + 200 = 575$$

And so does CLAUDIA SCHIFFER.

$$[3 + 30 + 1 + 300 + 4 + 9 + 1] + [100 + 3 + 8 + 9 + 6 + 6 + 5 + 90] = 575$$

So does the Danish phrase *deilig i Farve* (= lovely in colour), which you met last night when you were reading Hans Christian Andersen.

$$[4 + 5 + 9 + 30 + 9 + 7] + 9 + [6 + 1 + 90 + 400 + 5] = 575$$

As Mr Steyne keeps on talking about oysters, you decide to PROBE a little deeper. PROBE adds up to 227. So does SCHIFFER. You tremble as the equation runs past your mental eyes.

$$70 + 90 + 60 + 2 + 5 = 227 = 100 + 3 + 8 + 9 + 6 + 6 + 5 + 90$$

On the way home from church, you begin to HUM a hymn-tune.

HUM adds up to 348. So does CLAUDIA. You tremble again, and stop humming.

$$8 + 300 + 40 = 348 = 3 + 30 + 1 + 300 + 4 + 9 + 1$$

Hey! We have created nearly enough insanity for one chapter.

You remember what Li Bai said.

我 本 楚 狂 人

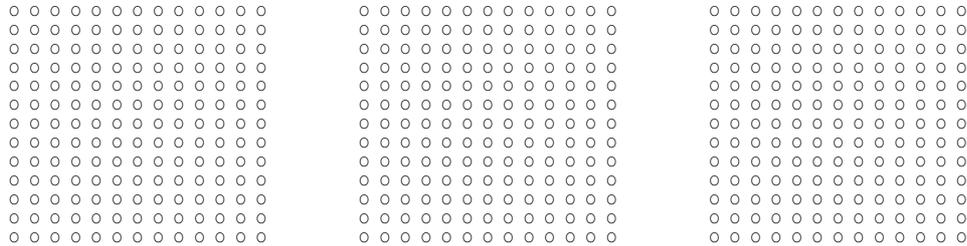
(= I am the mad man who comes from Chu).

Note that the five characters 我 本 楚 狂 人 contain respectively 7, 5, 13, 7, and 2 strokes, or a total of 34 strokes. It must be 'significant' that $2 \times [5 + 7 + 5] = 34$.

Furthermore, the last two words of the English translation (FROM CHU) add up to 507, which is three times the square of thirteen. So does PAMELA ANDERSON!

$$[6 + 90 + 60 + 40] + [3 + 8 + 300] = 507 = 3 \times [13 \times 13]$$

$$[70 + 1 + 40 + 5 + 30 + 1] + [1 + 50 + 4 + 5 + 90 + 100 + 60 + 50] = 507$$

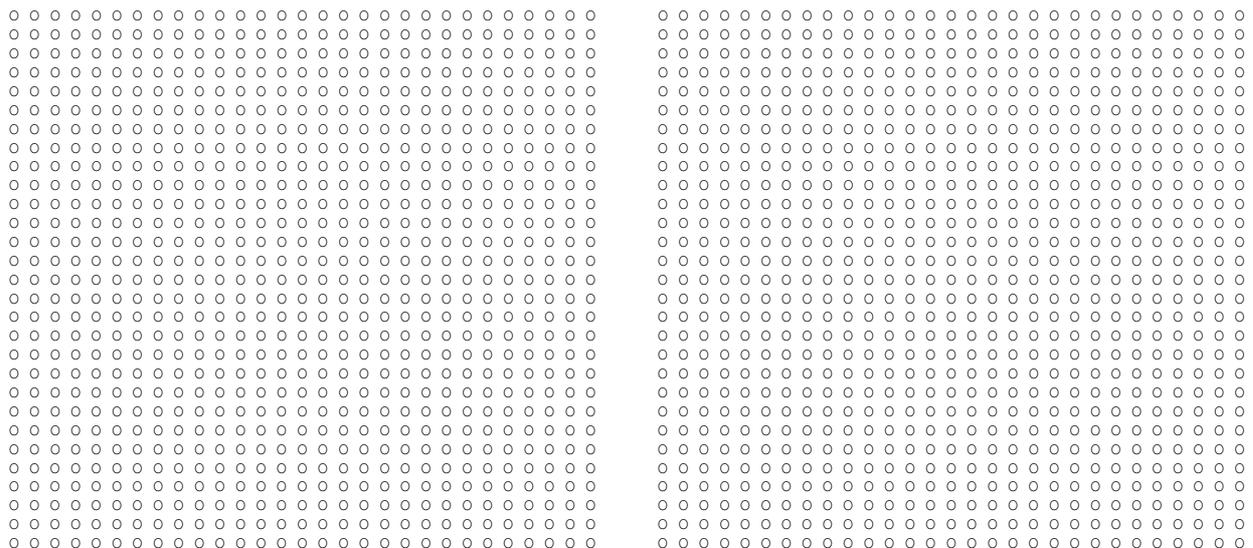


Finally, all nine words of the English translation add up to 1682, which is two times the square of twenty-nine.

$$9 + [1 + 40] + [200 + 8 + 5] + [40 + 1 + 4 + 40 + 1 + 50] + [500 + 8 + 60] = 967$$

$$[3 + 60 + 40 + 5 + 100] + [6 + 90 + 60 + 40] + [3 + 8 + 300] = 715$$

$$967 + 715 = 1682 = 2 \times [29 \times 29]$$



These five facts in themselves are WORSE THAN TRIVIAL, so we shan't waste time by considering them.

What have we gained? A basic understanding of how the letters of a numerical alphabet may be added up. What have we learned? That once you begin to add up words, you find yourself drowning in a sea of meaningless coincidence.

A sane person acknowledges the fact of coincidence. A lunatic believes every coincidence to be meaningful, even when its meaning may be neither articulated nor defined. Some people of intelligence choose to behave like lunatics.

I was once asked by a wise Australian friend, 'What numbers are significant?' The answer to that question struck me like a shaft of liberating light. NO NUMBERS ARE SIGNIFICANT IN THEMSELVES! Consider the Beastly Number itself, the number 666. If there are millions of households in a large nation, many

of them will have phone numbers beginning with 666. Those households are not accursed. Furthermore, if there are seven hundred hymns in your hymn-book, *one* of them is going to be number 666, and the preacher who asks you to sing hymn number 666 is not a cryptosatanist.

Imagine that you have to store a large number of plastic pipes. Each pipe has a length of twelve feet and an external diameter of six inches. Between two sheds in your yard there's a space eighteen feet by twelve feet, so you stack the pipes there, setting down first thirty-six pipes, then thirty-five on top of the thirty-six, then thirty-four on top of the thirty-five, and so on. It turns out that you have enough pipes to make a perfect triangle. The top layer consists of a single pipe. *Your stack happens to contain 666 pipes.* Well, big deal! You aren't under a curse. (Does the wind make a frightening noise whenever it blows through your mountain of pipes? You still aren't under a curse.)

Your car breaks down on what used to be called Highway 666. Are you under a curse? No, you're out of fuel. The same thing has happened to a lady called Miss Laine on Highway 375. Miss Laine doesn't blame her breakdown on the number of a highway. Neither should you. And now the film is ending.

Rosie has produced an old hymn-book from her bag. Without fear she begins to hum the tune of hymn number 666. You note with surprise the first seven words of verse 5 (*Can it be, that I, an alien.....?*). Those words lead you to quote and translate a line of the Bulgarian poet Peio Yavorov.

От други свят съм аз -- не си виновна ти

(= I come from another planet: you are not guilty).

One reader is saying that NOT GUILTY has the same gematric value as the name of a little-known author. A second reader is whispering to herself. 'Nine words of Bulgarian. Nine words of English. Eighteen words altogether. Thirty-seven letters of English. Eighteen times thirty-seven is six hundred and sixty-six.' And a third reader is muttering, 'One of my college course-numbers was 666.' Gaahh!

YOUR MIND HAS NO ROOM FOR NUMERICAL RUBBISH

A belief in the significance of COURSE-NUMBERS betokens an insane reverence for the sacred pigeon-holes of academe. Here is Saul Bellow, writing in the foreword to Allan Bloom's book *The Closing of the American Mind* (London, 1987), 14.

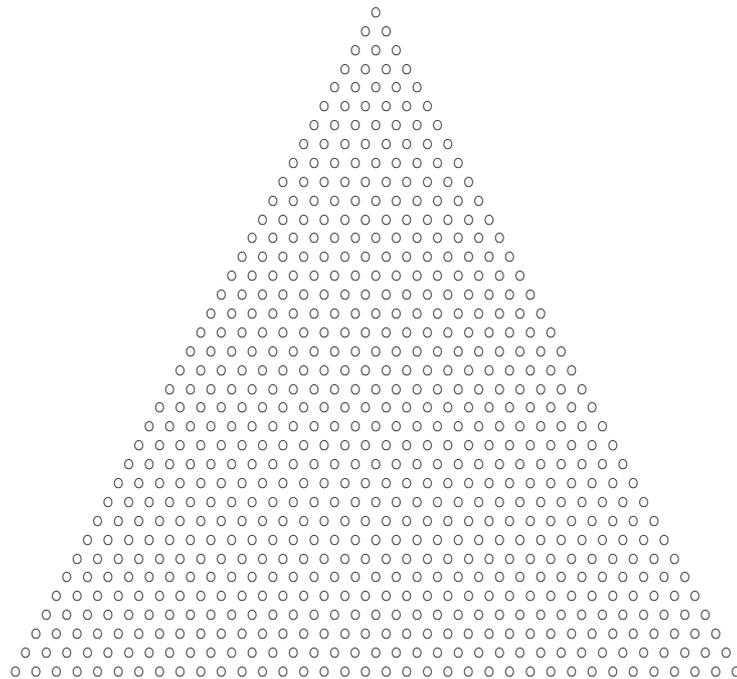
*If I signed up for **Economics 201**, I was sure to spend all my time reading Ibsen and Shaw.*

And here is Fredson Bowers, writing in the introduction to Vladimir Nabokov's *Lectures on Russian Literature* (London, 1982), vii.

*In the autumn semester of 1941, Nabokov started a regular appointment at Wellesley College where he was the Russian Department in his own person and initially taught courses in language and grammar, but he soon branched out with **Russian 201**, a survey of Russian literature in translation. In 1948 he transferred to Cornell University as Associate Professor of Slavic Literature where he taught **Literature 311-312**, *Masters of European Fiction*, and **Literature 325-326**, *Russian Literature in Translation*.*

Who wants to know about these squalid and meaningless numbers? Do Bellow and Bowers share a dark affection for the number 201? If you want a useful 201, you should buy Henry R Stern's book *201 Dutch Verbs* (New York, 1984).

Let me ask you a serious question while I slice up a honey melon. Aside from the technique of using a numerical alphabet, what will survive in your memory? The numbers which are interesting **IN THEMSELVES**. You'll forget the intimate shivers which you felt in the presence of 575, and 227, and 348. In time the glamorous 679 of **ROSIE STONE** may fade from your mind. After a few weeks, you'll be able to recall only the pieces of language which add up to 666 (the triangular number of thirty-six), 1296 (the square number of thirty-six), and 576 (the square number of twenty-four). In other words, you'll recall the numbers whose figurate **SHAPE** gives them some kind of identity. Even the number 666, which you knew about before you ever heard of gematria, will always have a certain triangular personality from now on.



Figurate art: 'I am a vampire'

Hereby hangs a lesson. There are times when gematria does represent the marriage of alphabetical letters and geometry. But the chief lesson of chapter 3 has involved *the acquisition of a technique*. We have learned how to handle the English numerical alphabet of units, tens, and hundreds. From now on we'll call this alphabet 'the 800 alphabet' after the value of its final letter.

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9

J = 10, K = 20, L = 30, M = 40, N = 50, O = 60, P = 70, Q = 80, R = 90

S = 100, T = 200, U = 300, V = 400, W = 500, X = 600, Y = 700, Z = 800

We have played with the 800 alphabet for a good reason. Aside from the sea of meaningless coincidence, there is a land of intentional action.

Authors can use the numerical alphabet deliberately so as to *increase the meaningful gravity of their texts*.

It is the EXTRA GRAVITY of certain texts that causes the antennae of a cryptanalyst to quiver. Language which has been purposefully weighted or freighted with extra meaning is HEAVIER than normal language. Readers who perceive neither its extra weight nor its extra meaning may find it more memorable than normal language, even in translation.

When a cryptanalyst reads a deliberately weighted text he finds himself saying, in the words of Liu Zongyuan,

遺 言 冀 可 冥

(= Behind the written words, I hope to discern a mystery).

On 5 May 2007 a Maltese reviewer described the violinist Sayaka Shoji as ‘a charming little wisp of a girl’. I’m certain that those seven words have no cryptographic subtext. But if on 14 February next year I see that you have addressed your Valentine card ‘TO MY BELOVED WISP’, I’ll discern a mystery behind the written words.....

W = 500, I = 9, S = 100, and P = 70.

$500 + 9 + 100 + 70 = 679$

.....and I’ll realize that the glamorous 679 of ROSIE STONE has *not* faded from your mind.

R = 90, O = 60, S = 100, I = 9, and E = 5.

S = 100, T = 200, O = 60, N = 50, and E = 5.

$[90 + 60 + 100 + 9 + 5] + [100 + 200 + 60 + 50 + 5] = 679$

It is an elementary fact of secret writing that the existence of a cryptogram must be apparent to the person who is intended to read it. Your girlfriend is five feet eleven inches tall, and she weighs 125 pounds, so she’s no wisp! Rosie will quickly realize that one word on the envelope of her Valentine card is a gematric cryptogram.

WISP = 679 = ROSIE STONE

That one word corresponds to the cup of water which you deliberately give to someone who is thirsty. The countless millions of gematric accidents correspond to all the water of the sea, which not even Thor could drink. And now we’ll stop work! I have promised to attend a private concert with my next-door neighbour. You can work at a couple of puzzles on your own.

Out in the street a stern lady barks, ‘He published his race-gender-class book in 2006. Now he’s supposed to be writing a sort of Platonic dialogue.’ Sad boy, whoever *he* is. What did Nietzsche say? *Plato ist langweilig* (= Plato is boring).

The night is not boring. Chaste and healthy-looking, Jane Dascey sings the rôle of Andromeda in Lully’s *Persée*. At the end, clad in her Act IV costume, she returns to play Corelli’s *La Folia* on a baroque violin which she borrowed from me several months ago. Archdeacon Blennerhassett Blane, one of the local music critics, is sitting on my left. Blane is famous for his *bons mots*, which are always stolen from obscure writers. Tonight he heads his 875-word review with a line from the Rhodesian poet Egerton Harvey: *Brighter than burnished gold*.

CHAPTER 4: THE INSTRUCTION OF FOOLS IS FOLLY

翠 華 想 像 空 山 裡

(= In the empty mountains one can imagine splendours of kingfisher-blue).

Du Fu

Chu poupin-là, i n'a autchun sens, i'y est fou coum énn âne

(= That idiot has no sense; he is as foolish as a donkey).

Guernesiais saying

Study can be a dangerous business. John Milton asks in 'Lycidas',

*Were it not better done as others use,
To sport with Amaryllis in the shade,
Or with the tangles of Neaera's hair?*

The Abélardian answer to Milton's question is *Sic et non*. Yes and no.

You sit up till 4.00 am in the pursuit of some textual Amaryllis whom you glimpsed among the trees after supper. As soon as you catch her, you discover that she weaves your different fibres of knowledge into a unified carpet of sense. Oh, and she wonderfully confirms many of your own notions. Should you reveal her existence to two colleagues of Miltonic intelligence, five hours later? Yes, of course. On your study floor you leave out four different books which will help these colleagues to discern the beauty of Amaryllis for themselves.

You sleep for less than two hours. (*As ugh, my cadley cha treih*, as it says in the old Manx lullaby. And oh, what a wretched slumber!) Without joy you wake to find that the day has dawned in a grey misery of rain. Shady young Amaryllis has left the premises. Oh, well! She can't expect you to believe in her any more. You blame the innocent desk-lamp for overheating your brains. The whole thing was fantastic nonsense. What are those stupid books about lycanthropy doing on the floor? You won't be showing them to anyone. Without pleasure you eat a frugal breakfast. Then you swim sixty-four lengths of the pool like a dyspeptic walrus, and drive to work through the glowing autumn mist.

It doesn't matter how finally you settle the matter of whether Amaryllis exists or not. What matters is that the enthusiast within you is tempered by the sceptic within you.

'Hey!' you protest. 'My inner sceptic is in perfect working order.'

That's good. Fill your pockets with cartridges of common sense, and come on outside. Four mad turkeys are gabbling in the farmyard. They need to be shot.

In case you want to check any of the gematric values which follow, I'll set out once again the English alphabet of units, tens, and hundreds, which we have decided to call 'the 800 alphabet'.

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9

J = 10, K = 20, L = 30, M = 40, N = 50, O = 60, P = 70, Q = 80, R = 90

S = 100, T = 200, U = 300, V = 400, W = 500, X = 600, Y = 700, Z = 800

Now we'll do a bit of practice by numerating some pieces of language from the previous chapter.

FOX adds up to 666.

$$6 + 60 + 600 = 666$$

So does ROSA STONE.

$$[90 + 60 + 100 + 1] + [100 + 200 + 60 + 50 + 5] = 666$$

So does the sentence I AM A VAMPIRE.

$$9 + [1 + 40] + 1 + [400 + 1 + 40 + 70 + 9 + 90 + 5] = 666$$

HIPPOPOTAMUS adds up to 988.

$$8 + 9 + 70 + 70 + 60 + 70 + 60 + 200 + 1 + 40 + 300 + 100 = 988$$

SKUNK adds up to 490.

$$100 + 20 + 300 + 50 + 20 = 490$$

WILAMOWITZ-MOELLENDORFF adds up to 2535. (The first part of the name adds up to 2149, and the second part adds up to 386.)

$$500 + 9 + 30 + 1 + 40 + 60 + 500 + 9 + 200 + 800 = 2149$$

$$40 + 60 + 5 + 30 + 30 + 5 + 50 + 4 + 60 + 90 + 6 + 6 = 386$$

$$2149 + 386 = 2535$$

SCHEHERAZADE adds up to 1030.

$$100 + 3 + 8 + 5 + 8 + 5 + 90 + 1 + 800 + 1 + 4 + 5 = 1030$$

MARIA MONTEZ adds up to 1296, which is the square of thirty-six.

$$[40 + 1 + 90 + 9 + 1] + [40 + 60 + 50 + 200 + 5 + 800] = 1296$$

SQUARE adds up to 576, which is the square of twenty-four.

$$100 + 80 + 300 + 1 + 90 + 5 = 576$$

PEW adds up to 575. SUMMER also adds up to 575. So does OUGHT.

$$[70 + 5 + 500] = [100 + 300 + 40 + 40 + 5 + 90] = [60 + 300 + 7 + 8 + 200] = 575$$

And so does CLAUDIA SCHIFFER. (According to the art critic of an obscure feminist broadsheet, Miss Schiffer is the subject of two new pictures. One of these pictures alludes to the sweet-wrappings of Confiturembourg. The other one alludes both to a Babylonian wall-mosaic and to a Mayan mask-mosaic.)

$$[3 + 30 + 1 + 300 + 4 + 9 + 1] + [100 + 3 + 8 + 9 + 6 + 6 + 5 + 90] = 575$$

PROBE adds up to 227. So does SCHIFFER.

$$[70 + 90 + 60 + 2 + 5] = [100 + 3 + 8 + 9 + 6 + 6 + 5 + 90] = 227$$

HUM adds up to 348. So does CLAUDIA.

$$[8 + 300 + 40] = [3 + 30 + 1 + 300 + 4 + 9 + 1] = 348$$

BOO adds up to 122. So does GONE. ('So do 13 and 109, the prime factors of 1417,' says my next-door neighbour. '1417 is the gematric value of *BEASTLY KNITS*.' She smiles. 'That's the title of a book by Lady Lalla Ward which I bought yesterday.')

$$[2 + 60 + 60] = [7 + 60 + 50 + 5] = 122 = 13 + 109$$

$$13 \times 109 = 1417 = [2 + 5 + 1 + 100 + 200 + 30 + 700] + [20 + 50 + 9 + 200 + 100]$$

Are you *afraid*? And are you becoming more familiar with the technique? Yes? Then let's look at four lunacies which have helped to give gematria a bad name.

LUNACY NUMBER ONE: ACCIDENTAL SHAPELINESS

The fact that ACCIDENTAL SHAPELINESS adds up to 784 (the square of twenty-eight) tells you NOTHING about accidental phenomena, or about shapeliness, or about squares.

Likewise, the fact that your surname FOX adds up to 666 (the triangular number of thirty-six) tells you NOTHING about yourself, about foxes, or about triangles.

The fact that your girlfriend's name ROSA STONE adds up to 666 tells you NOTHING about your girlfriend, about roses, about stones, or about triangles.

The fact that the sentence I AM A VAMPIRE adds up to 666 tells you NOTHING about yourself, about existence, about vampires, or about triangles.

The fact that MARIA MONTEZ adds up to 1296 (the square of thirty-six) tells you NOTHING about Maria Montez, or about squares.

$$M = 40, A = 1, R = 90, I = 9, \text{ and } A = 1.$$

$$M = 40, O = 60, N = 50, T = 200, E = 5, \text{ and } Z = 800.$$

$$[40 + 1 + 90 + 9 + 1] + [40 + 60 + 50 + 200 + 5 + 800] = 1296$$

The fact that SQUARE adds up to 576 (the square of twenty-four) is a mere accident, and not the result of cosmic engineering.

$$S = 100, Q = 80, U = 300, A = 1, R = 90, \text{ and } E = 5.$$

$$100 + 80 + 300 + 1 + 90 + 5 = 576$$

SQUARE adds up to 576. So what? Let's move up a dimension.....

.....and try CUBE.

$$C = 3, U = 300, B = 2, \text{ and } E = 5.$$

$$3 + 300 + 2 + 5 = 310$$

CUBE adds up to 310. Not a figurate number that we've heard of! Let's try ICOSAHEDRON.

$$I = 9, C = 3, O = 60, S = 100, A = 1, H = 8, E = 5, D = 4, R = 90, O = 60, \text{ and } N = 50.$$

$$9 + 3 + 60 + 100 + 1 + 8 + 5 + 4 + 90 + 60 + 50 = 390$$

ICOSAHEDRON adds up to 390. Not a figurate number that we've heard of! Let's try PARALLEPIPED.

$$P = 70, A = 1, R = 90, A = 1, L = 30, L = 30, E = 5, L = 30,$$

$$E = 5, P = 70, I = 9, P = 70, E = 5, \text{ and } D = 4.$$

$$70 + 1 + 90 + 1 + 30 + 30 + 5 + 30 + 5 + 70 + 9 + 70 + 5 + 4 = 420$$

PARALLELEPIPED adds up to 420. Not a figurate number that we've heard of!

SQUARE, CUBE, ICOSAHEDRON and PARALLELEPIPED add up to 1696.

$$576 + 310 + 390 + 420 = 1696$$

1696 is the sum of *thirty-six squared* and *twenty squared*, your inner enthusiast observes.

$$[36 \times 36] + [20 \times 20] = 1696$$

'So what?' asks your inner sceptic.

You happen to know that your surname FOX adds up to 666, which is the sum of *twenty-one squared* and *fifteen squared*.

$$[6 + 60 + 600] = [21 \times 21] + [15 \times 15] = 666$$

That particular sum tells you NOTHING about foxes, about squares, or about yourself.

The weak-minded gematrist finds significance where there is none, especially when he converts pieces of language into figurate numbers. As Shakespeare once said, he

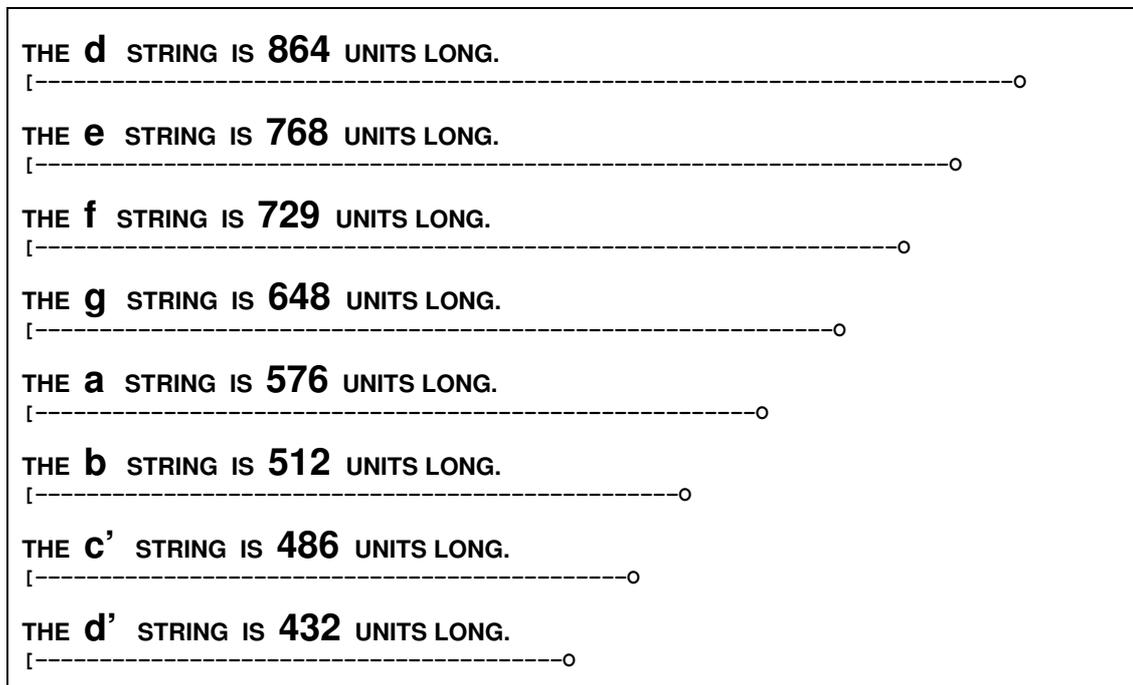
*Turns them to shapes and gives to airy nothing
A local habitation and a name.*

But there can be no significance without CONTEXT. Context is everything, whether in the world of music or in the world of figurate numbers.

Let the musical number 576 stand as an example. Imagine that you make an eight-string instrument which sounds the notes *d*, *e*, *f*, *g*, *a*, *b*, *c'*, and *d'* on strings of equal thickness and tension.

We'll see in a later chapter how your eight strings will need to have unitary lengths respectively of 864, 768, 729, 648, 576, 512, 486, and 432.

The note *a* will be sounded by your fifth string, which is 576 units long.



A musical physicist finds the number 576 significant **ONLY WHEN HE FINDS IT IN A CERTAIN CONTEXT**. If he buys for his wife a taupe jacket which costs \$576, he finds no 'significance' in the price. Likewise, he is unexcited to perceive that the word **TAUPE** has a gematric value of 576. He takes little pleasure in observing that 576 is the square of twenty-four. And he is not at all impressed by the fact that the word **SQUARE** has a gematric value of 576. When a musical physicist gets a bill for \$576 he doesn't walk about singing the note *a*, or thinking about squares. He pays the bill. But suppose that he's asked to provide a 288-bar drone-accompaniment for the prologue of a play written by the Czech actress **KAROLINA KURKOVA**. He learns that his job is to hold a continuous **A** on a specially made one-string instrument. That particular note is an octave lower than the *a* which is produced by a string 576 units long.

If an **A**-string has the same thickness and tension as the *a*-string which sounds an octave higher, the **A**-string will be exactly twice as long as the *a*-string. The eight-string harp of which we spoke has a *d'*-string 432 units long, and a *d*-string 864 units long. So if an *a*-string is 576 units long, an **A**-string having the same thickness and tension as that *a*-string will be 1152 units long.

During a break in rehearsal the musical physicist measures the single string of his instrument, and finds that it is 1152 millimetres long. Well, he isn't surprised. But he knows about the numerical alphabet, and he has worked out that the name of **KAROLINA KURKOVA** adds up to 1152.

Furthermore, the monotonal piece of music which he has been give to play comprises two hundred and eighty-eight bars, with four beats in each bar, so it contains altogether 1152 beats. (Each beat lasts for one second.)

Is it reasonable to see a numerical connection between the name of KAROLINA KURKOVA and the single note which the musical physicist is being paid to play for nineteen minutes and twelve seconds?

Yes, it is. But hark, the door-bell! Delia Benn has come for afternoon tea.

Apart from being one's next-door neighbour, and the regular subject of one's paintings, the said Delia is a well-known actress and dancer who has begun to fool about with gematria. You decide to amuse yourself by testing her credulity.

First you select twelve figurate numbers which are based on the number eleven. (That happens to be the number of strings on my viola d'amore.) Then you try to think of twelve words whose gematric values correspond respectively to the twelve figurate numbers. By the time Miss Benn is shown into your study, you have written down twelve heterogenous vocables.

Your chosen words are OF, PAN, PEAS, LAST, MARS, REARS, MAST, AVAILS, STARE, VAN, SAVE, and WALLS.

The word OF adds up to 66, which is the *triangular* number of eleven.

$$60 + 6 = 66$$

The word PAN adds up to 121, which is the *square* number of eleven.

$$70 + 1 + 50 = 121$$

The word PEAS adds up to 176, which is the *pentagonal* number of eleven.

$$70 + 5 + 1 + 100 = 176$$

The word LAST adds up to 331, which is the *centred hexagonal* number of eleven.

$$30 + 1 + 100 + 200 = 331$$

The word MARS adds up to 231, which is the *long hexagonal* number of eleven.

$$40 + 1 + 90 + 100 = 231$$

The word REARS adds up to 286, which is the *heptagonal* number of eleven.

$$90 + 5 + 1 + 90 + 100 = 286$$

The word MAST adds up to 341, which is the *stellate* number of eleven.

$$40 + 1 + 100 + 200 = 341$$

The word AVAILS adds up to 541, which is the *proper octagonal* number of eleven.

$$1 + 400 + 1 + 9 + 30 + 100 = 541$$

The word STARE adds up to 396, which is the *nonagonal* number of eleven.

$$100 + 200 + 1 + 90 + 5 = 396$$

The word VAN adds up to 451, which is the *decagonal* number of eleven.

$$400 + 1 + 50 = 451$$

The word SAVE adds up to 506, which is the *hendecagonal* number of eleven.

$$100 + 1 + 400 + 5 = 506$$

The word WALLS adds up to 661, which is the hexagon-based *dodecagonal* or *six-pointed star* number of eleven.

$$500 + 1 + 30 + 30 + 100 = 661$$

As soon as Delia sees what you're up to, she becomes rather animated.

'Those twelve words **MUST** be linked in some significant way,' she says. 'It can't be a coincidence that the gematric value of each word is a figurate number based on **ELEVEN**.' She pauses. 'All twelve words exhibit a kind of **ELEVENNESS**.'

But the words are linked in no 'significant' way, you reply. You thought capriciously of twelve figurate numbers, and then you looked for twelve words whose gematric values would correspond respectively to those numbers.

You didn't choose the twelve words for their meaning. You didn't even choose them for their sound! It is a mere accident that PAN rhymes with VAN, and that LAST rhymes with MAST.

Although you used 'elevenness' as a generator to get you started, the twelve words relate neither to 'elevenness', nor to the shape of a figurate number. (For example, PEAS tend not to come in elevens, and PEAS are not pentagonal.)

Delia is undeterred. She produces a piece of paper and a pen.

'Listen,' she says earnestly. 'The gematric values of all **TWELVE** words add up to **4107**.'

Miss Benn writes a long equation at high speed.

$$66 + 121 + 176 + 331 + 231 + 286 + 341 + 541 + 396 + 451 + 506 + 661 = 4107$$

'And the number 4107 has a digital sum of **TWELVE**. Look.' Delia writes again.

$$4 + 1 + 0 + 7 = 12$$

Here is a coincidence so trivial as to be altogether unworthy of notice, you reply.

'But it cannot be without significance that 4107 is three times the square of thirty-seven,' says Delia.

She writes her third equation with a flourish.

$$4107 = 3 \times 1369$$

Can it really not be ‘without significance’? You invite Delia to point out *the exact significance* of her final equation. She is silent.

At length she speaks again. ‘The twelve words contain a total of forty-nine letters, and forty-nine is the square number of seven.’

So what, you ask.

‘*My forename* has a gematric value of forty-nine,’ says Delia portentously. ‘So does the name of AGLAIA, who was one of the Three Graces. And apart from that, forty-nine was Sylvia Plath’s magic number.’

Suddenly you remember that Sylvia Plath once recited a passage of Chaucer to a field of cows.

○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○
○ ○ ○ ○ ○ ○ ○
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LUNACY NUMBER TWO: THE DOCTRINE OF EQUIVALENCE

The fact that THE DOCTRINE OF EQUIVALENCE adds up to 1588 tells you NOTHING about the phrase LAZY BAND, which also adds up to 1588.

Likewise, the fact that your surname FOX has the same beastly value as your girlfriend’s ‘proper’ name ROSA STONE doesn’t make you and your girlfriend twin souls.

About the equation FOX = ROSA STONE there is a noticeable asymmetry in linguistic terms. It takes *two* of your girlfriend’s names to equal *one* of your own names.

Furthermore, you won’t be allowed to join the local vampirarchy merely because the sentence I AM A VAMPIRE adds up to 666. Neither will your beautiful girlfriend.

Look at the sentence I AM AN ELK, which adds up to 156.

$$9 + [1 + 40] + [1 + 50] + [5 + 30 + 20] = 156$$

You happen to have an acquaintance called DELIA BENN whose two names add up to 156.

$$[4 + 5 + 30 + 9 + 1] + [2 + 5 + 50 + 50] = 156$$

In spite of her name’s gematric value, Delia Benn is not an elk.

HIPPOPOTAMUS adds up to 988.

$$8 + 9 + 70 + 70 + 60 + 70 + 60 + 200 + 1 + 40 + 300 + 100 = 988$$

So does the imposing phrase I TYPED.

$$9 + [200 + 700 + 70 + 5 + 4] = 988$$

You imagine what Lewis Carroll might have said.

*He thought he saw the phrase I TYPED,
And didn't make a fuss
Until he looked, and saw it was
A Hippopotamus.*

'That's good!' says Miss Benn. 'But other creatures have their own gematric equivalents.' She pauses. 'SKUNK adds up to 490, and so does SOUL. Look.'

$$100 + 20 + 300 + 50 + 20 = 100 + 60 + 300 + 30$$

The equation which Delia has shown us proves neither that skunks are soulful creatures, nor that the soul is a mephitic entity. Ignoring the equation, we'll move on to consider a scholarly creature of the nineteenth century.

WILAMOWITZ-MOELLENDORFF adds up to 2535.

$$500 + 9 + 30 + 1 + 40 + 60 + 500 + 9 + 200 + 800 = 2149$$

$$40 + 60 + 5 + 30 + 30 + 5 + 50 + 4 + 60 + 90 + 6 + 6 = 386$$

$$2149 + 386 = 2535$$

So does the sentence YOU ARE A STUPID USELESS ELK. Add up the first four words.

$$[700 + 60 + 300] + [1 + 90 + 5] + 1 + [100 + 200 + 300 + 70 + 9 + 4] = 1840$$

Now add up the last two words, and compute the total value of the sentence.

$$[300 + 100 + 5 + 30 + 5 + 100 + 100] + [5 + 30 + 20] = 695$$

$$1840 + 695 = 2535$$

Madness! Mind you, the sudden reappearance of the elk is a bit disturbing.

Maybe we should consider some of the numerated words that we've already seen, and try to come up with new equivalents.

SCHEHERAZADE adds up to 1030.

$$100 + 3 + 8 + 5 + 8 + 5 + 90 + 1 + 800 + 1 + 4 + 5 = 1030$$

So does UMA THURMAN.

$$[300 + 40 + 1] + [200 + 8 + 300 + 90 + 40 + 1 + 50] = 1030$$

(Will film-makers ever hand out rôles in accordance with gematria? After working out the total value of ORSON WELLES, you reckon that they won't.)

MARIA MONTEZ adds up to 1296.

$$[40 + 1 + 90 + 9 + 1] + [40 + 60 + 50 + 200 + 5 + 800] = 1296$$

So does WEARY, which is what you are becoming.

$$500 + 5 + 1 + 90 + 700 = 1296$$

PEW adds up to 575. SUMMER also adds up to 575. So does OUGHT.

$$70 + 5 + 500 = 100 + 300 + 40 + 40 + 5 + 90 = 60 + 300 + 7 + 8 + 200 = 575$$

So does CLAUDIA SCHIFFER.

$$[3 + 30 + 1 + 300 + 4 + 9 + 1] + [100 + 3 + 8 + 9 + 6 + 6 + 5 + 90] = 575$$

And so does DIOGENES CLUB, of which Mycroft Holmes (the brother of Sherlock) was a member.

$$[4 + 9 + 60 + 7 + 5 + 50 + 5 + 100] + [3 + 30 + 300 + 2] = 575$$

PROBE adds up to 227. So does SCHIFFER.

$$70 + 90 + 60 + 2 + 5 = 100 + 3 + 8 + 9 + 6 + 6 + 5 + 90 = 227$$

So does MASKING.

$$40 + 1 + 100 + 20 + 9 + 50 + 7 = 227$$

HUM adds up to 348. So does CLAUDIA.

$$8 + 300 + 40 = 3 + 30 + 1 + 300 + 4 + 9 + 1 = 348$$

So do THE LADS.

$$[200 + 8 + 5] + [30 + 1 + 4 + 100] = 348$$

By now you are beginning to lose interest in Miss Schiffer's multitudinous retinue of gematric equivalents. Do any other ladies have their own numerical retainers?

Oh, yes! LARA adds up to 122, and so does single-en JOANA.

$$30 + 1 + 90 + 1 = 10 + 60 + 1 + 50 + 1$$

As it must excite you to recall, BOO adds up to 122, and so does GONE.

$$2 + 60 + 60 = 122 = 7 + 60 + 50 + 5$$

What works for certain ladies also works for certain polygons.

SQUARE adds up to 576. So does **TAUPE**, and so does **PAVES**.

$$100 + 80 + 300 + 1 + 90 + 5 = 200 + 1 + 300 + 70 + 5 = 70 + 1 + 400 + 5 + 100$$

CUBE adds up to 310, and so does **DATES**.

$$3 + 300 + 2 + 5 = 4 + 1 + 200 + 5 + 100$$

ICOSAHEDRON adds up to 390, and so does **LOST**.

$$9 + 3 + 60 + 100 + 1 + 8 + 5 + 4 + 90 + 60 + 50 = 30 + 60 + 100 + 200$$

PARALLELEPIPED adds up to 420, and so does **SOOT**.

$$70 + 1 + 90 + 1 + 30 + 30 + 5 + 30 + 5 + 70 + 9 + 70 + 5 + 4 = 100 + 60 + 60 + 200$$

Not one of these equations bears any relation to **LANGUAGE**. Let's remember that the words to which we give numerical values have actually got **MEANINGS**. We shouldn't presume to link two unlinkable pieces of language merely by translating their letters into numbers.

I mean, look at the two words **VULPINE** and **OUTCAST**. Each of these words adds up to 864.

$$[400 + 300 + 30 + 70 + 9 + 50 + 5] = 864 = [60 + 300 + 200 + 3 + 1 + 100 + 200]$$

But that fatuous equation creates no link between the two words!

COMPUTER adds up to 768, and so does **YOGA**.

$$[3 + 60 + 40 + 70 + 300 + 200 + 5 + 90] = 768 = [700 + 60 + 7 + 1]$$

Once again, the equation creates no link between the two words.

It is a fact that **OUGHT** and **PEW** have the same gematric value. The fact has no significance. Only a lunatic will interpret the fact as indicating that one has a **DUTY** to attend **CHURCH**. If you interpret the fact in such a manner, I shall adduce the word **SUMMER**, and ask you whether your duty to attend church is purely an estival affair. (Something else. When you *do* attend church, does it help you in any way to know that you're sitting on the gematric equivalent of **CLAUDIA SCHIFFER**?)

What we may call 'the doctrine of equivalence' belongs in a madhouse. Look at the following trio of gematric accidents. **BLOOM** adds up to 192. So does **PEACHES**. So does the Indian actress **BENIKA DEEPAK**, who stars in *Ghoom*.

$$\text{BLOOM} \quad 2 + 30 + 60 + 60 + 40 \quad = \quad 192$$

$$\text{PEACHES} \quad 70 + 5 + 1 + 3 + 8 + 5 + 100 \quad = \quad 192$$

$$\text{BENIKA DEEPAK} \quad [2 + 5 + 50 + 9 + 20 + 1] + [4 + 5 + 5 + 70 + 1 + 20] \quad = \quad 192$$

Is there any connection between bloom, peaches, and Benika Deepak? No!

Some hymns have CHORUSES. FOX adds up to 666. So does CHORUSES.

$$6 + 60 + 600 = 3 + 8 + 60 + 90 + 300 + 100 + 5 + 100$$

Is there anything vulpine about CHORUSES? There is not.

DIVE adds up to 418, and so does IRISATED.

$$4 + 9 + 400 + 5 = 9 + 90 + 9 + 100 + 1 + 200 + 5 + 4$$

Does every DIVE generate a display of the prismatic colours? No!

BAT adds up to 203. So does SCARED. So does COMRADE.

$$2 + 1 + 200 = 100 + 3 + 1 + 90 + 5 + 4 = 3 + 60 + 40 + 90 + 1 + 4 + 5$$

Is there anything vespertilian about fear, or about comradeship? No!

MILLA JOVOVICH adds up to 1060. So do YOU.

$$[40 + 9 + 30 + 30 + 1] + [10 + 60 + 400 + 60 + 400 + 9 + 3 + 8] = 700 + 60 + 300$$

Another meaningless coincidence, unless you happen to be Milla Jovovich. (If you are, I'm really glad to know that you're reading these words, Miss Jovovich.)

I'll refrain from numerating THE BLUEBILLGURGLE, who is an important figure in the Netherlands, because five important readers are wanting to chip in.

'HYACINTH adds up to 979,' says Neighbour Verges.

$$8 + 700 + 1 + 3 + 9 + 50 + 200 + 8 = 979$$

'So does TYPED,' says Chumley the Walrus.

$$200 + 700 + 70 + 5 + 4 = 979$$

'So does CUMULATES,' says Beaky Thwaite.

$$3 + 300 + 40 + 300 + 30 + 1 + 200 + 5 + 100 = 979$$

'Do does A MYOCARDIAL LEAD,' says Theophilus Goon.

$$1 + [40 + 700 + 60 + 3 + 1 + 90 + 4 + 9 + 1 + 30] + [30 + 5 + 1 + 4] = 979$$

'So does the phrase SAVED A PTARMIGAN,' says Alain from *La fille mal gardée*.

$$[100 + 1 + 400 + 5 + 4] + 1 + [70 + 200 + 1 + 90 + 40 + 9 + 7 + 1 + 50] = 979$$

OK, you losers. THE MUSIC CRITIC adds up to 979. So does MAUD SILVER, the detective created by Patricia Wentworth. So does ROBINSON CRUSOE. So does ISAAC NEWTON. So does I AM THE PENTANDER OF GHOOM. Check the arithmetic. Then incorporate all ten pieces of language in a short story.

LUNACY NUMBER THREE: ONE IS MUCH THE SAME AS TWO

It is a fact that the sentence ONE IS MUCH THE SAME AS TWO adds up to 1795. That fact bears no relation to David Lewis Paget's phrase IN A CRAZY DREAM, which adds up to 1794. Let me explain what I mean.

The postman calls when you're out, so he leaves your parcel with old Mrs Thrett who lives next door. That's fine for a postman. It isn't fine for a mathematician. 576 is 576, and 575 is 575. Neither number can be said to partake of the other's nature. And yet one of the commonest tricks of the misguided gematrist is to say that for mystical purposes, $n = n \text{ plus or minus one}$. Any such nubilous formula is akin to the insane occultist doctrine that *everything is everything else*. Delia Benn has offered to furnish you with an example of neighbourly numbers.

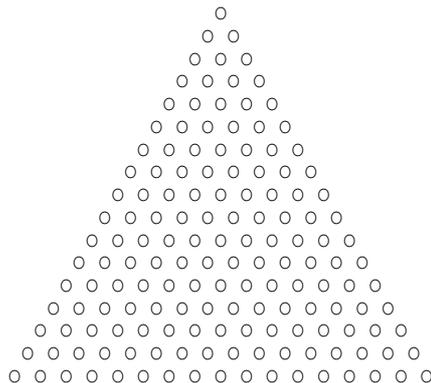
'MARIA MONTEZ adds up to 1296, the neighbour of 1295, which happens to be the value of the surname SEYMOUR (100 + 5 + 700 + 40 + 60 + 300 + 90). Here we may discern a clear allusion to the fact that the actress MARIA MONTEZ had a great deal in common with the actress [Jane] SEYMOUR.'

But now another visitor, your cousin Adam, is standing at the door. He has been reading Aleksandr Pushkin, and he wants to give Delia some advice.

Но полно, полно; перестань: No more, no more! You've said enough!
Ты заплатил безумству дань. You've drunk your fill of foolish stuff.

Adam shares your vulpine surname. He is an egg-hating economist who creates wonderful calligraphy and dreadful oil paintings. His many interests include English gematria, Russian literature, Turkish dance, and the Lara Croft films of Angelina Jolie. It amuses Adam to inform complete strangers that in English gematria ANGELINA adds up to 153, which is the triangular number of seventeen.

$$1 + 50 + 7 + 5 + 30 + 9 + 50 + 1 = 153$$



You can describe your cousin Adam as 'vulpine' if you like. And you can even refer to him colloquially as your 'coz'. Here's what you *can't* say.

'COZ adds up to 863 (3 + 60 + 800), and COZ is the neighbour of 864, which is the value of VULPINE, so gematria proves my cousin to be a fox.'

Listen! Two girls called Celia and Delia Austrian were born in 1874. Being twins, they had a great deal in common, but *Celia was not much the same as Delia*.

In gematric terms, CELIA differs from DELIA by as much as one differs from two.

$$[3 + 5 + 30 + 9 + 1] - [4 + 5 + 30 + 9 + 1] = 1 - 2$$

Likewise, GIANT'S CAUSEWAY differs from MAYA PLISETSKAYA by as much as one differs from two, so *basalt is not much the same as ballet*.

$$[7 + 9 + 1 + 50 + 200 + 100] + [3 + 1 + 300 + 100 + 5 + 500 + 1 + 700] = 1977$$

$$[40 + 1 + 700 + 1] + [70 + 30 + 9 + 100 + 5 + 200 + 100 + 20 + 1 + 700 + 1] = 1978$$

$$1977 - 1978 = 1 - 2$$

Stay with dance for a moment. On one wall of your cousin's study there hangs a signed photograph of the Turkish dancer YASEMIN KOZANOĞLU, whose two names add up to 2233.

$$[700 + 1 + 100 + 5 + 40 + 9 + 50] = 905$$

$$[20 + 60 + 800 + 1 + 50 + 60 + 7 + 30 + 300] = 1328$$

$$905 + 1328 = 2233$$

2233 is the neighbour of 2232, which happens to be the gematric value of a bizarre trio: ADAM, ANGELINA, AND MAYA PLISETSKAYA. Are you any wiser?

$$[1 + 4 + 1 + 40] + [1 + 50 + 7 + 5 + 30 + 9 + 50 + 1] + [1 + 50 + 4] + 1978 = 2232$$

2232 differs from 2233 by as much as one differs from two. The same goes for every pair of so-called numerical 'neighbours'. One is not much the same as two, and four is not much the same as five. Get real! A difference of ONE can completely change the form of something, as the figures below will show.



Two pieces of figurate art: 'Angelina = 153', and 'Leaning = 152'

FOUR PLUS ONE FROM THE KOREAN POET YUN SŎNDO

내버디 멋치나 흥 · 니 수석과 송죽이라

You want to know how many friends I have? Water, stone, bamboo, pine-tree!

동산의 ㄷ · 르오르니 괴더옥 반갑고야

Another merry friend of mine is the moon that is rising above a hill in the east.

두어라 이다스 · 스뵈긔 또더흥 · 야 머엇흥 · 리

I have these five friends. What other source of joy should I be looking for?

A healthy mathematician will keep close to fellow-creatures like water, stones, bamboos, pine-trees, and the moon. So will a healthy student of the Bible.

Do you want to stay sane? Then forget about numerical neighbours, and live gratefully in the real outdoor world that God has made.

LUNACY NUMBER FOUR: THE MAGNIFICENT SEVEN

It is a fact that the fourth lunacy's title comprises three words whose numbers of letters, arranged in descending order of magnitude, are eleven, five, and three. It is also a fact that THE MAGNIFICENT SEVEN adds up to 1153. These facts are worse than trivial. So is much of what you hear about the number seven.

An American interviewer once tried to discover the extent of public literacy by stopping people in the street and asking them questions. He enquired of one lady, 'Who fiddled while Rome burned?' The lady smirked, and replied with another question: 'Fiddled with what?'

I always remember that brilliant answer when I hear preachers describe the numbers *seven* and *three* as 'perfect numbers'. Their description is intolerable. Perfect for what? Let me repeat a dictum. NO NUMBERS ARE SIGNIFICANT IN THEMSELVES.

Heptaphilia (= love of the number seven) is a genuine disease in certain evangelical circles. There are preachers who become unaccountably excited whenever they see a seven. It would delight their souls if all humans were endowed like Cú Chulainn in the medieval Irish epic *Táin Bó Cúailnge*:

Secht meóir cehtar a dá choss, secht meóir cehtar a dá lám.....

(= Seven toes on each foot, seven fingers on each hand).

Heptaphiles start by looking obsessively for genuine sevens in the Bible. They go on to *fiddle the text* when it doesn't give them the seven for which their souls yearn. And every so often, an especially able scholiast delivers a sermon on 'Seven Weak Things in the Book of Judges'.

[Outside the world of Biblical studies, there are certain heptaphiles who will borrow the language of Falstaff and call me a 'base Assyrian knight' on account of my next two sentences. A Pleiadean heptagram appears on tablet CBS 1766 of the University Museum in Philadelphia. Before any accredited cuneiformist decides what that heptagram means, he should read its verbal text AS A SENTENCE in the light of Psalm 68. 24 (AV, verse 23).]

Some teachers of French get through life with a three-card trick of *voici, voilà, and eh bien*. Some teachers of English literature get through life with a three-card trick of Alliteration, Description of Nature, and Irony.

Some preachers are content with a *one-card* trick. 'Look, here's the seven of clubs. Or the seven of spades. Seven, don't you see? Marvel at the number!' If they knew Browning's 'Abt Vogler', they would quote the following ten words.

..... ye have heard and seen: consider, and bow the head!

They might even explain those TEN words as a combination of SEVEN and THREE, relying on their credulous listeners to believe that seven and three are both 'perfect numbers'.

Of course the Bible contains MANY REAL SEVENS.

God rested on the seventh day (Genesis 2. 2).

A Hebrew servant was to go out free in the seventh year (Exodus 21. 2)

In the day of his cleansing a leper was to be sprinkled seven times (Leviticus 14. 7).

Whoever touched a corpse would be unclean for seven days (Numbers 19.11).

The feast of tabernacles was to be observed for seven days (Deuteronomy 16. 13).

SEVENS ARE IMPORTANT. We find seven trumpets in Joshua 6. 8, seven trumpets in Revelation 8. 6, and seven golden candlesticks in Revelation 1. 12.

Beneath the surface of the text, the seven lamps of the golden candlestick (Exodus 37. 17-18) provide a pattern for many of the Bible's literary structures.

And he made the candlestick of pure gold: of beaten work made he the candlestick; his shaft, and his branch, his bowls, his knops, and his flowers, were of the same: And six branches going out of the sides thereof; three branches of the candlestick out of the one side thereof, and three branches of the candlestick out of the other side thereof.....

The 3-1-3 pattern of the seven lamps is bound to catch the imagination of any writer who thinks in literary terms of beginning, middle, and end. (It may also catch the imagination of a composer who thinks in musical terms of A-B-A.) If you want to acquaint yourself with 'candlestick form', you should begin by reading Casper J Labuschagne, *Numerical Secrets of the Bible* (BIBAL Press: North Richland Hills, Texas, 2000), 47, and Duane L Christensen, *New Testament Epistles and the Revelation to John* (BIBAL Press: North Richland Hills, Texas, 2003), 7, 18, 114.

THE IMPORTANCE OF THE BIBLICAL NUMBER SEVEN MUST NOT BE DEMEANED BY IDLE OR SUPERFICIAL COMMENTS. WE SHOULD CALL THE ATTENTION OF OTHER PEOPLE TO A PARTICULAR BIBLICAL SEVEN ONLY IF WE CAN TELL THEM WHAT IT MEANS IN ITS OWN CONTEXT.

A sensible reader of the Bible does not EXPECT things to come in sevens. When they do, he remarks the fact without undue excitement. When they do not, he remarks the fact without any disappointment.

There is ONE tree of life in the garden of Eden (Genesis 2. 9).

There are TWO bronze pillars in the temple (II Chronicles 3. 15).

Job has THREE beautiful daughters (Job 42. 13-15).

FOUR beasts say 'Amen' (Revelation 5. 14).

David takes FIVE smooth stones out of the brook (I Samuel 17. 40).

God makes heaven and earth in SIX days (Exodus 20. 11).

Jesse has EIGHT sons (I Samuel 17. 12).

The covering of the king of Tyrus contains NINE precious stones (Ezekiel 28. 13).

There are TEN commandments (Exodus 20. 3-17).

On the day of Pentecost Peter stands up with the ELEVEN (Acts 2. 14).

Jacob has TWELVE sons (Genesis 35. 22).

A sensible reader of the Bible does not DESIRE the gematric values of words to be evenly divisible by seven.

When they are, he remarks the fact without undue excitement.

When they are not, he remarks the fact without any disappointment.

Delia Benn is pleased to pronounce a piece of language 'significant' if its gematric value is evenly divisible by seven.

Last night she read somewhere that the Hebrew text of Leviticus 19. 26 has a total gematric value of 2051.

Today she tells you portentously, 'Two thousand and fifty-one is equal to seven times two hundred and ninety-three.'

You ask her two questions. *What does the seven MEAN, and what does the two hundred and ninety-three MEAN?*

(If the seven is 'significant', then the two hundred and ninety-three has to be 'significant' as well.)

Delia begins to weep, and leaves the room.

An hour later, after covering two pages with gematric equations, she returns.

$$\text{ROSIE STONE: } [90 + 60 + 100 + 9 + 5] + [100 + 200 + 60 + 50 + 5] = 679$$

$$\text{SKUNK: } 100 + 20 + 300 + 50 + 20 = 490$$

$$\text{SOUL: } 100 + 60 + 300 + 30 = 490$$

$$\text{PARALLELEPIPED: } 70 + 1 + 90 + 1 + 30 + 30 + 5 + 30 + 5 + 70 + 9 + 70 + 5 + 4 = 420$$

$$\text{SOOT: } 100 + 60 + 60 + 200 = 420$$

$$\text{MARS: } 40 + 1 + 90 + 100 = 231$$

$$\text{DELIA: } 4 + 5 + 30 + 9 + 1 = 49$$

$$\text{BAT: } 2 + 1 + 200 = 203$$

$$\text{SCARED: } 100 + 3 + 1 + 90 + 5 + 4 = 203$$

$$\text{COMRADE: } 3 + 60 + 40 + 90 + 1 + 4 + 5 = 203$$

| <u>WORD OR NAME</u> | <u>GEMATRIC VALUE</u> | <u>FACTORS</u> |
|-------------------------------|-----------------------|----------------|
| ROSIE STONE | 679 | 7 x 97 |
| SKUNK (and SOUL) | 490 | 7 x 70 |
| PARALLELEPIPED (and SOOT) | 420 | 7 x 60 |
| MARS | 231 | 7 x 33 |
| DELIA | 49 | 7 x 7 |
| BAT (and SCARED, and COMRADE) | 203 | 7 x 29 |

‘Look at those ten pieces of language!’ says Delia imperiously. ‘The gematric value of each one is evenly divisible by SEVEN. That *has* to be significant.’

You ask her one question. *What is the significance of the factor seven in each case?*

Delia goes off without speaking. Oh, dear! I’m really distressed to see what has happened to my next-door neighbour. Delia Benn is the most robust, literate, and intelligent person whom I know. It’s hard to believe that last year, in pursuit of total knowledge, she and I went on a parascending course. Delia used to make homespun cloth, but for the last two months she has been coming out with pieces of mad numerology, and today she looks hot-eyed.

Have we heard enough foolish talk about the number seven?

In truth, we need no more examples of gematric heptaphilia. And we can vaccinate ourselves *against the disease* by performing a gematric experiment.

We’ve been using what we call ‘the 800 alphabet’ after the value of its final letter.

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9

J = 10, K = 20, L = 30, M = 40, N = 50, O = 60, P = 70, Q = 80, R = 90

S = 100, T = 200, U = 300, V = 400, W = 500, X = 600, Y = 700, Z = 800

There may come times when we’ll need to call this alphabet ‘the 800 *English* alphabet’ so as to distinguish it from the Hebrew and Greek gematric alphabets.

What-ho! We’ve reached the point at which we must begin to work in Hebrew.

The Hebrew alphabet contains twenty-two characters:

aleph, beth, gimel, daleth, he, wau, zayin, cheth, teth,
yodh, kaph, lamedh, mem, nun, samekh, ayin, pe, tzaddi,
qoph, resh, s[h]in, tau.

(Its penultimate character does duty for two different letters, shin and sin.)

Here is the numerical HEBREW alphabet of units, tens, and hundreds. We'll call it 'the 400 Hebrew alphabet' after the value of its final letter.

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

Thirty-seven important words in the Old Testament are rendered respectively by the English vocables *man* (= 'Adam'), *light*, *man* (a different word from 'Adam'), *God*, *earth*, *woman*, *covenant*, *nations*, *temple*, *sacrifice*, *life*, *wisdom*, *mercy*, *good*, [the] *LORD*, *Israel*, *salvation*, *righteous*, *glory*, *priest*, *king*, *commandment*, *soul*, *book*, *people*, *passover*, *righteousness*, *holy*, *voice*, *spirit*, *evil*, *hell*, *seven*, *sabbath*, *name*, *heaven(s)*, and *law*.

We'll spell out the thirty-seven Hebrew words which are represented by these English vocables, and then compute their gematric values.

| | | |
|-----------|--------------------------|-----------------------------|
| man | aleph-daleth-mem | $1 + 4 + 40 = 45$ |
| light | aleph-wau-resh | $1 + 6 + 200 = 207$ |
| man | aleph-yodh-shin | $1 + 10 + 300 = 311$ |
| God | aleph-lamedh-he-yodh-mem | $1 + 30 + 5 + 10 + 40 = 86$ |
| earth | aleph-resh-tzaddi | $1 + 200 + 90 = 291$ |
| woman | aleph-shin-he | $1 + 300 + 5 = 306$ |
| covenant | beth-resh-yodh-tau | $2 + 200 + 10 + 400 = 612$ |
| nations | gimel-wau-yodh-mem | $3 + 6 + 10 + 40 = 59$ |
| temple | he-yodh-kaph-lamedh | $5 + 10 + 20 + 30 = 65$ |
| sacrifice | zayin-beth-cheth | $7 + 2 + 8 = 17$ |
| life | cheth-yodh-yodh-mem | $8 + 10 + 10 + 40 = 68$ |
| wisdom | cheth-kaph-mem-he | $8 + 20 + 40 + 5 = 73$ |
| mercy | cheth-samekh-daleth | $8 + 60 + 4 = 72$ |
| good | teth-wau-beth | $9 + 6 + 2 = 17$ |

| | | |
|---------------|----------------------------|---------------------------------|
| the LORD | yodh-he-wau-he | $10 + 5 + 6 + 5 = 26$ |
| Israel | yodh-sin-resh-aleph-lamedh | $10 + 300 + 200 + 1 + 30 = 541$ |
| salvation | yodh-shin-wau-ayin-he | $10 + 300 + 6 + 70 + 5 = 391$ |
| righteous | yodh-shin-resh | $10 + 300 + 200 = 510$ |
| glory | kaph-beth-wau-daleth | $20 + 2 + 6 + 4 = 32$ |
| priest | kaph-he-nun | $20 + 5 + 50 = 75$ |
| king | mem-lamedh-kaph | $40 + 30 + 20 = 90$ |
| commandment | mem-tzaddi-wau-he | $40 + 90 + 6 + 5 = 141$ |
| soul | nun-pe-shin | $50 + 80 + 300 = 430$ |
| book | samekh-pe-resh | $60 + 80 + 200 = 340$ |
| people | ayin-mem | $70 + 40 = 110$ |
| passover | pe-samekh-cheth | $80 + 60 + 8 = 148$ |
| righteousness | tzaddi-daleth-qoph | $90 + 4 + 100 = 194$ |
| holy | qoph-daleth-wau-shin | $100 + 4 + 6 + 300 = 410$ |
| voice | qoph-wau-lamedh | $100 + 6 + 30 = 136$ |
| spirit | resh-wau-cheth | $200 + 6 + 8 = 214$ |
| evil | resh-ayin | $200 + 70 = 270$ |
| hell | shin-aleph-wau-lamedh | $300 + 1 + 6 + 30 = 337$ |
| seven | shin-beth-ayin | $300 + 2 + 70 = 372$ |
| sabbath | shin-beth-tau | $300 + 2 + 400 = 702$ |
| name | shin-mem | $300 + 40 = 340$ |
| heaven(s) | shin-mem-yodh-mem | $300 + 40 + 10 + 40 = 390$ |
| law | tau-wau-resh-he | $400 + 6 + 200 + 5 = 611$ |

(Hark, the doorbell! Jane Dascey has come over to borrow an Icelandic *langspil*.)

Those gematrists who insist on seeing seven as the point of everything should leave the room now. Here's a fact. NOT ONE of our thirty-seven gematric totals adds up to a number which is evenly divisible by seven. That fact will help us to see what a great folly heptaphilia is.

While we're on the subject, let me shoot down a kindred folly: the attachment of pejority to the number THIRTEEN. Four of our gematric totals add up to numbers which are evenly divisible by thirteen.

| | | |
|-----------|---------------------|---|
| temple | he-yodh-kaph-lamedh | $5 + 10 + 20 + 30 = 65 = 5 \times 13$ |
| the LORD | yodh-he-wau-he | $10 + 5 + 6 + 5 = 26 = 2 \times 13$ |
| sabbath | shin-beth-tau | $300 + 2 + 400 = 702 = 54 \times 13$ |
| heaven(s) | shin-mem-yodh-mem | $300 + 40 + 10 + 40 = 390 = 30 \times 13$ |

NOT ONE of the Hebrew words which are spelled out in the middle column can be seen as pejorative in the smallest degree. So we can expel from our minds any stupid idea that the number thirteen is somehow bad, evil, wicked, naughty, or unlucky.

[Are you in the mood for mental hygiene? Then there are several other ideas, all based on fatuous generality, which we can expel in the same intellectual breath.

From time to time you read sentences which begin as follows.

The ancients believed that the cycles of birth and death, growth and decay, depended on the waxing and waning of the moon.....

The ancients believed that angels pushed the planets along their paths in the sky.....

The ancients believed that writing partook of the invisible.....

No, they didn't. No, they didn't. And NO, THEY DIDN'T.

'The ancients' do not constitute a unified school of thinkers and believers. Many people in the ancient world thought and believed many different things.

Likewise, 'the Greeks' do not constitute a unified school of thinkers and believers. Look at the following sentence.

The Greeks believed that the universe had existed for all eternity.

No, they didn't. Many Greeks in the ancient world thought and believed many different things.

Whenever you read a sentence to the effect that 'the ancients' or 'the Greeks' unanimously regarded this or that thing in such-and-such a way, you are reading a piece of nonsense.

(It would be stupid for scholars three thousand years from now to characterize 'the British' as a unified school of thinkers and believers, with John Milton smiling happily across the library at Algernon Charles Swinburne.)

Watch out for general statements about 'the Jews'. Here's one.

The Jews have always believed that their teachings were passed down orally, with the writings being a source of support and inspiration.

No, they haven't. 'The Jews' do not constitute a unified body of thinkers and believers. In the course of history many Jews have thought and believed many different things.]

Delia has made tea! Before we stop for a break, listen to Edgar Allan Poe.

It is the nature of truth in general, as of some ores in particular, to be richest when most superficial.

Never allow subtextual disciplines like gematria to absorb all your mental energy. What numbers don't need to be dug for? The ones that are lying there on the surface of the text, waiting to be investigated. Look at the following three passages from *Táin Bó Cúailnge*.

Tonnecat trí nónbair a h-Insib Faíche.

(Twenty-seven [= thrice nine] men came to us from the Isles of Faiche).

Trí fir déac dano ba h-é a lín. Gontai Cú Chulaind oc Cingit Ferchon.

(Thirteen men made up his band. Cú Chulainn slew them at Cingit Ferchon.)

Toscara Cú Chulaind dá sé n-déc n-dagláech díb aitherroch immon n-uscú.

(In like manner Cú Chulainn defeated thirty-two

[= twice sixteen] of their fighting men beside the river.)

It would be foolish for a Celtic gematrist to ignore the real numbers of men – twenty-seven, thirteen, and thirty-two -- which appear in these three passages.

No harm in saying it. Irish phrases having forms like *thrice nine* and *twice sixteen* remind us of the Hopi word *paaptsivot* (*paa-p-tsvot* = three-times-five, or fifteen). Many numerical vocables require their reader to perform an act of calculation. People in France say *quatre-vingts* (= fourscore, or eighty), although the word *huitante* may still be heard in Jersey.

It would be equally foolish for a Biblical gematrist to ignore the 128 men of Anathoth who appear in Ezra 2. 23.

That reminds me. In chapter 5 you'll add up the gematric values of 128 Hebrew words. At the mere thought of so much work, one of my readers is behaving

Sí com lo taur se'n va fuit pel desert (= Like the bull which flees into the desert), as the Catalan author Ausiàs March wrote in one of his poems. It happens that 128 pieces of verse are attributed to Ausiàs March (1397-1459).

The number 128 has an impressive literary pedigree. Thomas Gray's 'Elegy Written in a Country Churchyard' consists of 128 lines. So does the poem 'Corson's Inlet' by A R Ammons. Furthermore, the Chinese poet Du Fu wrote 128 pieces of verse in which he mentioned the moon.

'I really needed to know about Du Fu,' says Jane Dascey. 'Here's another potent fact for you. *Luna* in Latin means *moon*, but in Palawa kani it means *woman*.'

No grounds for argument there. Now be quiet and let me finish. There are at least 128 moons in the solar system. Du Fu was on to something.

'So was Hank Williams,' says Delia. 'He wrote 128 songs. By so doing, he cryptically recorded the fact that a hepteract has 128 vertices.'

'You two are merely *amateur* lunatics,' says Rosie. 'Listen! Whittaker has four rather weird friends. They are all disciples of someone called Malaclypse the Younger. What I'm telling you now is true.' She pauses. 'Yesterday I heard one member of the quartet complaining about *Jane's Defence Weekly*. He said that it had been created to militarize the minds of young girls.'

Let me now welcome each of my merry readers to the 'house' of chapter 5.

A
L E
P H B
E T H G
I M E L D
A L E T H H
E W A U Z A Y
I N C H E T H T
E T H Y O D H K
A P H L A M E D
H M E M N U N S
A M E K H A Y I
N P E T Z A D D
I Q O P H R E S
H S H I N T A U

At the top of each page you'll see the 400 Hebrew alphabet, set out as follows.

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

Underneath the alphabet you'll find four columns which you should mentally number 1, 2, 3, and 4, reading from left to right.

Column 1 contains English words.

Column 2 spells out the corresponding Hebrew words.

Column 3 gives you the gematric values of those Hebrew words.

Column 4 consists of lines on which you should write very lightly in pencil.

Cover up column 3 with a ruler (use two blobs of Blu-Tack if you're reading at the screen), and add up the words in column 2 for yourself.

Write your totals on the lines in column 4.

Once you come to the end of a page, remove the ruler from column 3, and check your totals.

Understandest thou what thou readest?

Then off you go! That big girl Rosie Stone has already started.

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

| | | | |
|-------------------|--------------------------|-----|-------|
| father | aleph-beth | 3 | _____ |
| stone | aleph-beth-nun | 53 | _____ |
| man | aleph-daleth-mem | 45 | _____ |
| light | aleph-wau-resh | 207 | _____ |
| ear | aleph-zayin-nun | 58 | _____ |
| brother | aleph-cheth | 9 | _____ |
| one | aleph-cheth-daleth | 13 | _____ |
| sister | aleph-cheth-wau-tau | 415 | _____ |
| enemy | aleph-yodh-beth | 13 | _____ |
| nothing | aleph-yodh-nun | 61 | _____ |
| man | aleph-yodh-shin | 311 | _____ |
| God | aleph-lamedh-he-yodh-mem | 86 | _____ |
| mother | aleph-mem | 41 | _____ |
| truth | aleph-mem-tau | 441 | _____ |
| four | aleph-resh-beth-ayin | 273 | _____ |
| ark (of the LORD) | aleph-resh-wau-nun | 257 | _____ |
| lion | aleph-resh-yodh | 211 | _____ |
| earth | aleph-resh-tzaddi | 291 | _____ |
| fire | aleph-shin | 301 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

| | | | |
|-----------|-------------------------|-----|-------|
| woman | aleph-shin-he | 306 | _____ |
| garment | beth-gimel-daleth | 9 | _____ |
| house | beth-yodh-tau | 412 | _____ |
| son | beth-nun | 52 | _____ |
| master | beth-ayin-lamedh | 102 | _____ |
| morning | beth-qoph-resh | 302 | _____ |
| covenant | beth-resh-yodh-tau | 612 | _____ |
| blessing | beth-resh-kaph-he | 227 | _____ |
| flesh | beth-sin-resh | 502 | _____ |
| daughter | beth-tau | 402 | _____ |
| great | gimel-daleth-wau-lamedh | 43 | _____ |
| nations | gimel-wau-yodh-mem | 59 | _____ |
| camel | gimel-mem-lamedh | 73 | _____ |
| garden | gimel-nun | 53 | _____ |
| word | daleth-beth-resh | 206 | _____ |
| door | daleth-lamedh-tau | 434 | _____ |
| road, way | daleth-resh-kaph | 224 | _____ |
| temple | he-yodh-kaph-lamedh | 65 | _____ |
| mountain | he-resh | 205 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

| | | | |
|----------|---------------------|-----|-------|
| gold | zayin-he-beth | 14 | _____ |
| old | zayin-qoph-nun | 157 | _____ |
| seed | zayin-resh-ayin | 277 | _____ |
| festival | cheth-gimel | 11 | _____ |
| life | cheth-yodh-yodh-mem | 68 | _____ |
| wise | cheth-kaph-mem | 68 | _____ |
| wisdom | cheth-kaph-mem-he | 73 | _____ |
| five | cheth-mem-shin-he | 353 | _____ |
| grace | cheth-nun | 58 | _____ |
| mercy | cheth-samekh-daleth | 72 | _____ |
| statute | cheth-qoph | 108 | _____ |
| sword | cheth-resh-beth | 210 | _____ |
| darkness | cheth-shin-kaph | 328 | _____ |
| good | teth-wau-beth | 17 | _____ |
| hand | yodh-daleth | 14 | _____ |
| the LORD | yodh-he-wau-he | 26 | _____ |
| day | yodh-wau-mem | 56 | _____ |
| child | yodh-lamedh-daleth | 44 | _____ |
| sea | yodh-mem | 50 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

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samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

| | | | |
|-----------|----------------------------|-----|-------|
| beautiful | yodh-pe-he | 95 | _____ |
| Israel | yodh-sin-resh-aleph-lamedh | 541 | _____ |
| salvation | yodh-shin-wau-ayin-he | 391 | _____ |
| righteous | yodh-shin-resh | 510 | _____ |
| heavy | kaph-beth-daleth | 26 | _____ |
| glory | kaph-beth-wau-daleth | 32 | _____ |
| priest | kaph-he-nun | 75 | _____ |
| star | kaph-wau-kaph-beth | 48 | _____ |
| Canaan | kaph-nun-ayin-nun | 190 | _____ |
| silver | kaph-samekh-pe | 160 | _____ |
| bread | lamedh-cheth-mem | 78 | _____ |
| night | lamedh-yodh-lamedh-he | 75 | _____ |
| hundred | mem-aleph-he | 46 | _____ |
| desert | mem-daleth-beth-resh | 246 | _____ |
| death | mem-wau-tau | 446 | _____ |
| water | mem-yodh-mem | 90 | _____ |
| angel | mem-lamedh-aleph-kaph | 91 | _____ |
| war | mem-lamedh-cheth-mem-he | 123 | _____ |
| king | mem-lamedh-kaph | 90 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

| | | | |
|--------------|---------------------|-----|-------|
| commandment | mem-tzaddi-wau-he | 141 | _____ |
| judgment | mem-shin-pe-teth | 429 | _____ |
| prophet | nun-beth-yodh-aleph | 63 | _____ |
| river | nun-he-resh | 255 | _____ |
| snake | nun-cheth-shin | 358 | _____ |
| soul | nun-pe-shin | 430 | _____ |
| horse | samekh-wau-samekh | 126 | _____ |
| book | samekh-pe-resh | 340 | _____ |
| servant | ayin-beth-daleth | 76 | _____ |
| Hebrew | ayin-beth-resh-yodh | 282 | _____ |
| bat | ayin-teth-lamedh-pe | 189 | _____ |
| eye | ayin-yodh-nun | 130 | _____ |
| city | ayin-yodh-resh | 280 | _____ |
| people | ayin-mem | 110 | _____ |
| dust | ayin-pe-resh | 350 | _____ |
| tree | ayin-tzaddi | 160 | _____ |
| evening | ayin-resh-beth | 272 | _____ |
| ten | ayin-sin-resh | 570 | _____ |
| time, season | ayin-tau | 470 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

| | | | |
|---------------|-----------------------|-----|-------|
| mouth | pe-he | 85 | _____ |
| passover | pe-samekh-cheth | 148 | _____ |
| ox | pe-resh | 280 | _____ |
| cow | pe-resh-he | 285 | _____ |
| fruit | pe-resh-yodh | 290 | _____ |
| Pharaoh | pe-resh-ayin-he | 355 | _____ |
| sheep, flock | tzaddi-aleph-nun | 141 | _____ |
| righteousness | tzaddi-daleth-qoph | 194 | _____ |
| grave | qoph-beth-resh | 302 | _____ |
| holy | qoph-daleth-wau-shin | 410 | _____ |
| voice | qoph-wau-lamedh | 136 | _____ |
| head | resh-aleph-shin | 501 | _____ |
| great | resh-beth | 202 | _____ |
| foot | resh-gimel-lamedh | 233 | _____ |
| spirit | resh-wau-cheth | 214 | _____ |
| evil | resh-ayin | 270 | _____ |
| friend | resh-ayin | 270 | _____ |
| shepherd | resh-ayin-he | 275 | _____ |
| hell | shin-aleph-wau-lamedh | 337 | _____ |

aleph = 1, beth = 2, gimel = 3, dalet = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

| | | | |
|-----------|---------------------|-----|-------|
| seven | shin-beth-ayin | 372 | _____ |
| sabbath | shin-beth-tau | 702 | _____ |
| dawn | shin-cheth-resh | 508 | _____ |
| health | shin-lamedh-wau-mem | 376 | _____ |
| three | shin-lamedh-shin | 630 | _____ |
| eight | shin-mem-nun-he | 395 | _____ |
| name | shin-mem | 340 | _____ |
| heaven(s) | shin-mem-yodh-mem | 390 | _____ |
| sun | shin-mem-shin | 640 | _____ |
| year | shin-nun-he | 355 | _____ |
| two | shin-nun-yodh-mem | 400 | _____ |
| six | shin-shin | 600 | _____ |
| law | tau-wau-resh-he | 611 | _____ |
| nine | tau-shin-ayin | 770 | _____ |

What's your score out of a hundred and twenty-eight? If you've got more than a hundred and twenty right answers, you can award yourself the hilarious title of 'Enlightened Adept'. I've already awarded that title to Rosie Stone, who has gained full marks. You should be pleased. Having an intelligent lady companion while you study gematria will help to keep you sane. Of course you can remind Rosie of what Wei Yingwu said:

孝 恭 遵 婦 道

(= Be courteous and obedient, like a dutiful woman).

CHAPTER 6: THE DAY OF SMALL THINGS

帶 回 航 海 的 二 十 二 顆 星

(= I return from my sea-voyage with a cargo of twenty-two star-gems).

Zheng Chouyu

(Hark, the doorbell! Jane Dascey has come over to borrow an alto rebec.

In terms of the 800 English alphabet, my last two sentences add up to 3773, which is what mathematicians call 'the structured great rhombicuboctahedral number of seven'! It is clear that Miss Dascey's advent is of great consequence.)

Anyway. You remember how in chapter 3 we played around with the ENGLISH numerical alphabet of units, tens, and hundreds. Why did we do so? Because we were preparing ourselves to approach the HEBREW alphabet of units, tens, and hundreds.

But there is also an English numerical alphabet which runs from 1 to 26. In terms of that numerical alphabet THE KOREAN POET adds up to 153.

You remember how we called the English numerical alphabet of units, tens, and hundreds 'the 800 English alphabet' after the value of its final letter.

We'll think now in terms of 'the 26 English alphabet', which has gematric values as follows.

A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9

J = 10, K = 11, L = 12, M = 13, N = 14, O = 15, P = 16, Q = 17, R = 18

S = 19, T = 20, U = 21, V = 22, W = 23, X = 24, Y = 25, Z = 26

You will familiarize yourself with the 26 alphabet if you do a few exercises.

First, add up the three letters of your own surname, which is FOX.

F = 6, O = 15, and X = 24.

$6 + 15 + 24 = 45$

Your vulpine surname adds up to 45. Nothing beastly to worry about there.

Your girlfriend is called ROSIE STONE.

R = 18, O = 15, S = 19, I = 9, and E = 5.

S = 19, T = 20, O = 15, N = 14, and E = 5.

What is the total value of her two names?

$$[18 + 15 + 19 + 9 + 5] + [19 + 20 + 15 + 14 + 5] = 139$$

Once again, nothing beastly, although you're disappointed to see that there's not a hint of you and the beautiful Rosie being twin souls.

Now you remember the actress MARIA MONTEZ.

$$[13 + 1 + 18 + 9 + 1] + [13 + 15 + 14 + 20 + 5 + 26] = 135$$

MARIA MONTEZ adds up to 135, which is neither a square nor a triangular number, but the word SQUARE does add up to 81, which is the square of nine.

$$19 + 17 + 21 + 1 + 18 + 5 = 81$$

You recall how in terms of the 800 English alphabet the words PEW, SUMMER, and OUGHT tallied both with each other and with CLAUDIA SCHIFFER.

What happens if you transcribe these four numerical cousins in terms of the 26 English alphabet?

Well, they cease to be cousins. PEW adds up to 44.

$$16 + 5 + 23 = 44$$

SUMMER adds up to 89.

$$19 + 21 + 13 + 13 + 5 + 18 = 89$$

OUGHT adds up to 71.

$$15 + 21 + 7 + 8 + 20 = 71$$

And CLAUDIA SCHIFFER adds up to 125.

$$[3 + 12 + 1 + 21 + 4 + 9 + 1] + [19 + 3 + 8 + 9 + 6 + 6 + 5 + 18] = 125$$

You decide to PROBE a little deeper. PROBE adds up to 56.

$$16 + 18 + 15 + 2 + 5 = 56$$

SCHIFFER, which tallied with PROBE in chapter 3, adds up to 74.

$$19 + 3 + 8 + 9 + 6 + 6 + 5 + 18 = 74$$

You fail to HUM with excitement, because HUM adds up to 42.....

$$8 + 21 + 13 = 42$$

.....and CLAUDIA, with which it tallied in chapter 3, adds up to 51.

$$3 + 12 + 1 + 21 + 4 + 9 + 1 = 51$$

The 26 English alphabet has provided magicians of the 'cannot-be-without-significance' school with many hours of entertainment. These magicians often discern opaque ties of kinship between the paper tigers of coincidence. They have published several mad equations in books, and on the internet. Here's one.

$$\text{OCEAN} = 38 = \text{TIDE}$$

$$[15 + 3 + 5 + 1 + 14] = [20 + 9 + 4 + 5]$$

Here's another.

$$\text{MOON} = 57 = \text{TIDES}$$

$$[13 + 15 + 15 + 14] = [20 + 9 + 4 + 5 + 19]$$

What follows is triply impressive.

$$\text{CAXTON} = 77 = \text{PRINT} = 77 = \text{PRESS}$$

$$[3 + 1 + 24 + 20 + 15 + 14] = [16 + 18 + 9 + 14 + 20] = [16 + 18 + 5 + 19 + 19]$$

So is the next example.

$$\text{DISEASE} = 62 = \text{GERMS} = 62 = \text{PLAGUE}$$

$$[4 + 9 + 19 + 5 + 1 + 19 + 5] = [7 + 5 + 18 + 13 + 19] = [16 + 12 + 1 + 7 + 21 + 5]$$

It's a pity that there were no gematriatrices in the old days.

Now watch.

$$\text{JOSEPH} = 73 = \text{EGYPT}$$

$$[10 + 15 + 19 + 5 + 16 + 8] = [5 + 7 + 25 + 16 + 20]$$

Clever one! A *Biblical* equation is bound to go down well with church people. Not that EGYPT is the whole story. Guess what BRITAIN adds up to.

$$2 + 18 + 9 + 20 + 1 + 9 + 14 = 73$$

And there's more.

$$\text{UNITED} = 73 = \text{KINGDOM}$$

$$[21 + 14 + 9 + 20 + 5 + 4] = [11 + 9 + 14 + 7 + 4 + 15 + 13]$$



Hey, , as Sarastro might have said when he met Papageno! (Tee, hee. Some day I'll get round to exposing the secret world of ornithic hieroglyphics in a book called *Ibis Unveiled*.)

Sixth and lastly, as Dogberry says, here is an equation that tells you everything.

$$\text{INNOCENT} = 94 = \text{GUILTY}$$

$$[9 + 14 + 14 + 15 + 3 + 5 + 14 + 20] = [7 + 21 + 9 + 12 + 20 + 25]$$

Have you had enough? Not yet? Then I'll set down once again the values of the 26 alphabet, and allow you to check a further six magical equations for yourself.

$$A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9$$

$$J = 10, K = 11, L = 12, M = 13, N = 14, O = 15, P = 16, Q = 17, R = 18$$

$$S = 19, T = 20, U = 21, V = 22, W = 23, X = 24, Y = 25, Z = 26$$

The first equation is concerned with *money*.

$$\text{SPECULATION} = 135 = \text{STOCK EXCHANGE} = 135 = \text{WALL STREET}$$

Even gematria teaches us that money makes the world go round.

$$\text{MONEY} = 72 = \text{WORLD} = 72 = \text{ROUND} = 72 = \text{WHEELS}$$

Have you ever wondered why we can't hear the sound of the rotation?

$$\text{QUIET} = 72 = \text{STILL}$$

It's a bit like the music of the spheres. Subtle sort of thing.

And at times the message of gematria can be so subtle that only people of intelligence are able to discern it. I mean to say, did you know that when you stand with arms akimbo, you declare the reality of the Martian canals?

$$\text{ARMS} = 51 = \text{AKIMBO} = 51 = \text{MARS} = 51 = \text{the neighbour of 50} = \text{CANALS}$$

Mental wheels are whimsical things. The name of the planet brings to your mind the name of a horse called MARS that once ran at Belmont Park! Well, you and I are both reasonably horsey people. We'll enjoy an equitational equation.

$$\text{HUNTING} = 93 = \text{TALLY-HO}$$

Rosie Stone's father happens to be a votary of *pigeon-racing*. How do his birds find their way back to the loft? Gematria reveals all.

$$\text{HOMING} = 66 = \text{PIGEON}$$

Mr Stone runs a market garden. His Ausonia potatoes have a famous flavour which he attributes to the liberal use of well-composted *pigeon manure*. Now the said substance does its money-making work in silence, so of course MANURE adds up to 72.

$$72 = \text{MONEY} = 72 = \text{QUIET} = 72 = \text{MANURE} = 72$$

No more talk about manure! The English 26 alphabet is the counterpart of what we call 'the 22 Hebrew alphabet' after the value of its final letter.

As you recall, the Hebrew alphabet contains twenty-two letters:

*aleph, beth, gimel, daleth, he, wau, zayin, cheth, teth,
yodh, kaph, lamedh, mem, nun, samekh, ayin, pe, tzaddi,
qoph, resh, s[h]in, tau.*

Here is the 22 Hebrew alphabet.

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 11, lamedh = 12, mem = 13, nun = 14,

samekh = 15, ayin = 16, pe = 17, tzaddi = 18

qoph = 19, resh = 20, s[h]in = 21, tau = 22

Now we'll go straight into another set of exercises. (Don't groan! And don't tell me that having to work in a second numerical alphabet will confuse you! Ah knows how smart you is. So does that big supermodel you's goin' out with.)

At the top of each page you'll see the 22 Hebrew alphabet, set out as above.

Underneath the alphabet you'll find four columns which you should mentally number 1, 2, 3, and 4, reading from left to right.

Column 1 contains English words.

Column 2 spells out the corresponding Hebrew words.

Column 3 gives you the gematric values of those Hebrew words.

Column 4 consists of lines on which you should write very lightly in pencil.

Cover up column three with a ruler (use two blobs of Blu-Tack if you're reading at the screen), and add up the words in column two for yourself.

Write your totals on the lines in column 4.

Once you come to the end of a page, remove the ruler from column 3, and check your totals.

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 11, lamedh = 12, mem = 13, nun = 14,

samekh = 15, ayin = 16, pe = 17, tzaddi = 18

qoph = 19, resh = 20, s[h]in = 21, tau = 22

| | | | |
|-------------------|--------------------------|----|-------|
| father | aleph-beth | 3 | _____ |
| stone | aleph-beth-nun | 17 | _____ |
| man | aleph-daleth-mem | 18 | _____ |
| light | aleph-wau-resh | 27 | _____ |
| ear | aleph-zayin-nun | 22 | _____ |
| brother | aleph-cheth | 9 | _____ |
| one | aleph-cheth-daleth | 13 | _____ |
| sister | aleph-cheth-wau-tau | 37 | _____ |
| enemy | aleph-yodh-beth | 13 | _____ |
| nothing | aleph-yodh-nun | 25 | _____ |
| man | aleph-yodh-shin | 32 | _____ |
| God | aleph-lamedh-he-yodh-mem | 41 | _____ |
| mother | aleph-mem | 14 | _____ |
| truth | aleph-mem-tau | 36 | _____ |
| four | aleph-resh-beth-ayin | 39 | _____ |
| ark (of the LORD) | aleph-resh-wau-nun | 41 | _____ |
| lion | aleph-resh-yodh | 31 | _____ |
| earth | aleph-resh-tzaddi | 39 | _____ |
| fire | aleph-shin | 22 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 11, lamedh = 12, mem = 13, nun = 14,

samekh = 15, ayin = 16, pe = 17, tzaddi = 18

qoph = 19, resh = 20, s[h]in = 21, tau = 22

| | | | |
|-----------|-------------------------|----|-------|
| woman | aleph-shin-he | 27 | _____ |
| garment | beth-gimel-daleth | 9 | _____ |
| house | beth-yodh-tau | 34 | _____ |
| son | beth-nun | 16 | _____ |
| master | beth-ayin-lamedh | 30 | _____ |
| morning | beth-qoph-resh | 41 | _____ |
| covenant | beth-resh-yodh-tau | 54 | _____ |
| blessing | beth-resh-kaph-he | 38 | _____ |
| flesh | beth-sin-resh | 43 | _____ |
| daughter | beth-tau | 24 | _____ |
| great | gimel-daleth-wau-lamedh | 25 | _____ |
| nations | gimel-wau-yodh-mem | 32 | _____ |
| camel | gimel-mem-lamedh | 28 | _____ |
| garden | gimel-nun | 17 | _____ |
| word | daleth-beth-resh | 26 | _____ |
| door | daleth-lamedh-tau | 38 | _____ |
| road, way | daleth-resh-kaph | 35 | _____ |
| temple | he-yodh-kaph-lamedh | 38 | _____ |
| mountain | he-resh | 25 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 11, lamedh = 12, mem = 13, nun = 14,

samekh = 15, ayin = 16, pe = 17, tzaddi = 18

qoph = 19, resh = 20, s[h]in = 21, tau = 22

| | | | |
|----------|---------------------|----|-------|
| gold | zayin-he-beth | 14 | _____ |
| old | zayin-qoph-nun | 40 | _____ |
| seed | zayin-resh-ayin | 43 | _____ |
| festival | cheth-gimel | 11 | _____ |
| life | cheth-yodh-yodh-mem | 41 | _____ |
| wise | cheth-kaph-mem | 32 | _____ |
| wisdom | cheth-kaph-mem-he | 37 | _____ |
| five | cheth-mem-shin-he | 47 | _____ |
| grace | cheth-nun | 22 | _____ |
| mercy | cheth-samekh-daleth | 27 | _____ |
| statute | cheth-qoph | 27 | _____ |
| sword | cheth-resh-beth | 30 | _____ |
| darkness | cheth-shin-kaph | 40 | _____ |
| good | teth-wau-beth | 17 | _____ |
| hand | yodh-daleth | 14 | _____ |
| the LORD | yodh-he-wau-he | 26 | _____ |
| day | yodh-wau-mem | 29 | _____ |
| child | yodh-lamedh-daleth | 26 | _____ |
| sea | yodh-mem | 23 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 11, lamedh = 12, mem = 13, nun = 14,

samekh = 15, ayin = 16, pe = 17, tzaddi = 18

qoph = 19, resh = 20, s[h]in = 21, tau = 22

| | | | |
|-----------|----------------------------|----|-------|
| beautiful | yodh-pe-he | 32 | _____ |
| Israel | yodh-sin-resh-aleph-lamedh | 64 | _____ |
| salvation | yodh-shin-wau-ayin-he | 58 | _____ |
| righteous | yodh-shin-resh | 51 | _____ |
| heavy | kaph-beth-daleth | 17 | _____ |
| glory | kaph-beth-wau-daleth | 23 | _____ |
| priest | kaph-he-nun | 30 | _____ |
| star | kaph-wau-kaph-beth | 30 | _____ |
| Canaan | kaph-nun-ayin-nun | 55 | _____ |
| silver | kaph-samekh-pe | 43 | _____ |
| bread | lamedh-cheth-mem | 33 | _____ |
| night | lamedh-yodh-lamedh-he | 39 | _____ |
| hundred | mem-aleph-he | 19 | _____ |
| desert | mem-daleth-beth-resh | 39 | _____ |
| death | mem-wau-tau | 41 | _____ |
| water | mem-yodh-mem | 36 | _____ |
| angel | mem-lamedh-aleph-kaph | 37 | _____ |
| war | mem-lamedh-cheth-mem-he | 51 | _____ |
| king | mem-lamedh-kaph | 36 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 11, lamedh = 12, mem = 13, nun = 14,

samekh = 15, ayin = 16, pe = 17, tzaddi = 18

qoph = 19, resh = 20, s[h]in = 21, tau = 22

| | | | |
|--------------|---------------------|----|-------|
| commandment | mem-tzaddi-wau-he | 42 | _____ |
| judgment | mem-shin-pe-teth | 60 | _____ |
| prophet | nun-beth-yodh-aleph | 27 | _____ |
| river | nun-he-resh | 39 | _____ |
| snake | nun-cheth-shin | 43 | _____ |
| soul | nun-pe-shin | 52 | _____ |
| horse | samekh-wau-samekh | 36 | _____ |
| book | samekh-pe-resh | 52 | _____ |
| servant | ayin-beth-daleth | 22 | _____ |
| Hebrew | ayin-beth-resh-yodh | 48 | _____ |
| bat | ayin-teth-lamedh-pe | 54 | _____ |
| eye | ayin-yodh-nun | 40 | _____ |
| city | ayin-yodh-resh | 46 | _____ |
| people | ayin-mem | 29 | _____ |
| dust | ayin-pe-resh | 53 | _____ |
| tree | ayin-tzaddi | 34 | _____ |
| evening | ayin-resh-beth | 38 | _____ |
| ten | ayin-sin-resh | 57 | _____ |
| time, season | ayin-tau | 38 | _____ |

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 11, lamedh = 12, mem = 13, nun = 14,

samekh = 15, ayin = 16, pe = 17, tzaddi = 18

qoph = 19, resh = 20, s[h]in = 21, tau = 22

| | | | |
|---------------|-----------------------|----|-------|
| mouth | pe-he | 22 | _____ |
| passover | pe-samekh-cheth | 40 | _____ |
| ox | pe-resh | 37 | _____ |
| cow | pe-resh-he | 42 | _____ |
| fruit | pe-resh-yodh | 47 | _____ |
| Pharaoh | pe-resh-ayin-he | 58 | _____ |
| sheep, flock | tzaddi-aleph-nun | 33 | _____ |
| righteousness | tzaddi-daleth-qoph | 41 | _____ |
| grave | qoph-beth-resh | 41 | _____ |
| holy | qoph-daleth-wau-shin | 50 | _____ |
| voice | qoph-wau-lamedh | 37 | _____ |
| head | resh-aleph-shin | 42 | _____ |
| great | resh-beth | 22 | _____ |
| foot | resh-gimel-lamedh | 35 | _____ |
| spirit | resh-wau-cheth | 34 | _____ |
| evil | resh-ayin | 36 | _____ |
| friend | resh-ayin | 36 | _____ |
| shepherd | resh-ayin-he | 41 | _____ |
| hell | shin-aleph-wau-lamedh | 40 | _____ |

aleph = 1, beth = 2, gimel = 3, dalet = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 11, lamedh = 12, mem = 13, nun = 14,

samekh = 15, ayin = 16, pe = 17, tzaddi = 18

qoph = 19, resh = 20, s[h]in = 21, tau = 22

| | | | |
|-----------|---------------------|----|-------|
| seven | shin-beth-ayin | 39 | _____ |
| sabbath | shin-beth-tau | 45 | _____ |
| dawn | shin-cheth-resh | 49 | _____ |
| health | shin-lamedh-wau-mem | 52 | _____ |
| three | shin-lamedh-shin | 54 | _____ |
| eight | shin-mem-nun-he | 53 | _____ |
| name | shin-mem | 34 | _____ |
| heaven(s) | shin-mem-yodh-mem | 57 | _____ |
| sun | shin-mem-shin | 55 | _____ |
| year | shin-nun-he | 40 | _____ |
| two | shin-nun-yodh-mem | 58 | _____ |
| six | shin-shin | 42 | _____ |
| law | tau-wau-resh-he | 53 | _____ |
| nine | tau-shin-ayin | 59 | _____ |

What's your score out of a hundred and twenty-eight? If you've got more than a hundred and twenty-four right answers, you deserve to be rewarded with some really high-powered title. *I'm on for that*, sez you. All right, then. There happens to be a Hebrew vowel which is known as the 'Furtive Pathach'. Never mind why. Call yourself 'Thrice Illustrious Master of the Furtive Pathach', and people will wonder if you've made a slave out of some poor illegal immigrant.

Your beautiful girlfriend has got full marks again. She wants us to acknowledge the fact. Shall we convert Rosie's three names into a piece of figurate art?

Go for it, sez she. That sounds like an order! Let us numerate the three names of your beloved in terms of the 800 English alphabet. We already know that ROSIE STONE adds up to 679, and DARTE is $4 + 1 + 90 + 200 + 5 = 300$, so we can create a rectangle with a long side of eighty-nine and a short side of eleven.



But Rosie is beginning to wonder about numerical *notation*. ‘Tell me something,’ she says. ‘Suppose that an ancient Israelite wanted to write the number 979 in the course of his daily work. Would he have been obliged to think of some Hebrew word that added up to 979?’

That is a good question, and the answer is NO! Say you use the first nine letters of the Hebrew alphabet to represent respectively the NUMBERS one to nine. Unless you’re a mad obscurantist, addicted to the proliferation of symbols, you’ll use the same nine letters to represent respectively the DIGITS one to nine. So you’ll write 23 as beth-gimel, 32 as gimel-beth, and 979 as teth-zayin-teth.

‘Clear enough,’ says Rosie. ‘What did the ancient Israelites use for zero?’

I reckon that from no later than the time of David, they used the letter shin. We’ll see in chapter 23 how David employed the articulate form of the Hebrew word for ‘sun’ to represent zero. Without the article that word is spelled shin-mem-shin, and it constitutes a piece of arithmetic in itself.

Our English letter A on its own is a word, and so is the Hebrew letter MEM on its own. Mem means ‘from’, so the word shin-mem-shin may be construed ‘shin from shin’, or ‘shin subtracted from shin’.

Since in 400 Hebrew gematria shin = 300, the word shin-mem-shin may be read as a little equation: three hundred from three hundred equals zero.

It would have been most natural to use the first letter of the word shin-mem-shin as a symbol for zero.

The Hebrew DIGITS corresponding to our 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0 would therefore have been represented respectively by the letters aleph, beth, gimel, dalet, he, wau, zayin, cheth, teth, and shin.

In 400 Hebrew gematria those ten LETTERS add up to 345, which is the 400 gematric value of the Hebrew word *sephorah* (samekh-pe-reshe = ‘number’).

$$[1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 300] = 345 = [60 + 80 + 200 + 5]$$

In chapter 7 we’ll go back to using the 400 gematric alphabet.

CHAPTER 7: THE HEAVENS AND THE EARTH

The LORD by wisdom hath founded the earth.....

Proverbs 3. 19

Vísdómur er ein tung byrða (= Wisdom is a heavy burden).

Faroese song

Let's begin by reminding ourselves of the 400 Hebrew alphabet.

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

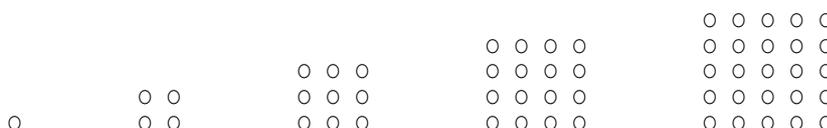
We'll go on to remind ourselves of some figurate numbers.

Here are the first five *triangular numbers*: 1, 3, 6, 10, and 15.



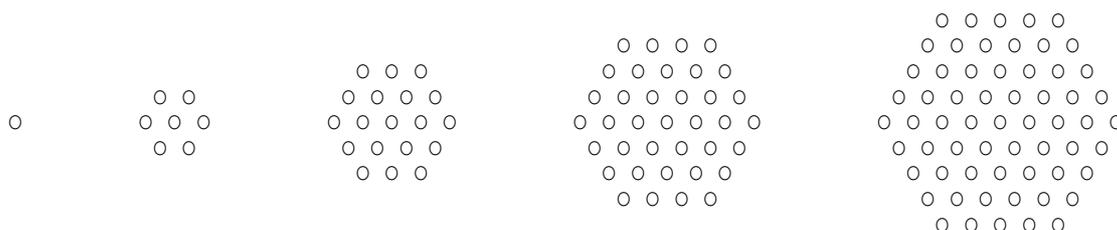
Triangular numbers have the formula $n^2 + n$, all over 2.

Here are the first five *square numbers*: 1, 4, 9, 16, and 25.



Square numbers have the formula n^2 .

Here are the first five *centred hexagonal numbers*: 1, 7, 19, 37, and 61.

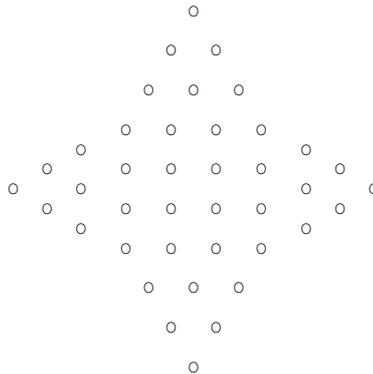


Centred hexagonal numbers have the formula $3n^2 - 3n + 1$.

The Chinese word for 'hexagon' is 六邊形 (= six-side-figure). Its second character has *nineteen* strokes, and its third character has *seven* strokes. Don't be getting excited! The same observations can be made in respect of the Chinese word for 'pentagon', which is 五邊形 (= five-side-figure).

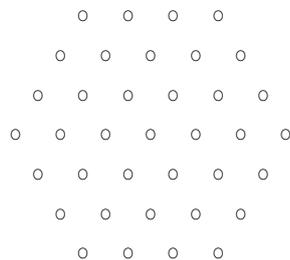
Let's move on. The octagonal or stellate number of n consists of a square of n with a triangle of n minus one on each of its four sides.

Here's the stellate number of four, which is forty. Stellate numbers have the formula $3n^2 - 2n$.

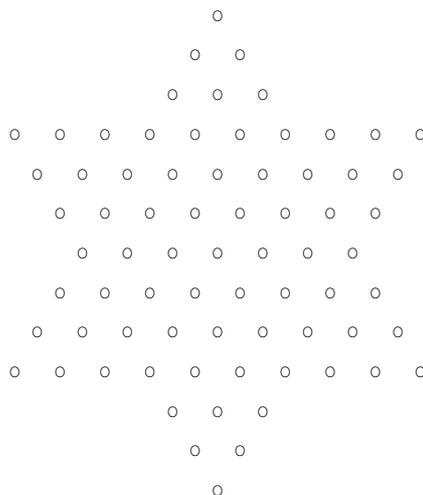


How do we get a *six-pointed* numerical star? By setting a triangle of $n - 1$ on each side of the centred hexagonal number of n .

Take thirty-seven, the centred hexagonal number of four.



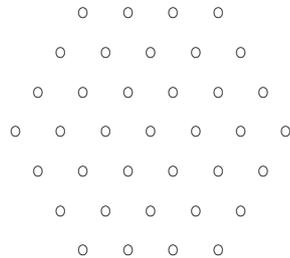
Then set a triangle of three on each side of the hexagon, thus:



That gives us the *dodecagonal number* of four, which is seventy-three. Dodecagonal numbers have the formula $6n^2 - 6n + 1$.

What may the dodecagonal number of four suggest? Well, it looks like a star, so humour me by allowing it to represent the heavenly bodies, or the heavens.

Look now at the *centred hexagonal* number of four, thirty-seven, which once appeared in *Punch* (16 December 1987, page 34). Notice that the figure of a hexagon is as near as you can get to a circle by drawing six straight lines.



What may the centred hexagonal number of four suggest? Humour me by allowing it to represent the world, or the earth.

We'll pause here so as to note certain facts.

The Hebrew word cheth-kaph-mem-he means 'wisdom', and in 400 gematria it has a value of $8 + 20 + 40 + 5 = 73$.

The Hebrew word he-beth-lamedh means 'vanity', and in 400 gematria it has a value of $5 + 2 + 30 = 37$.

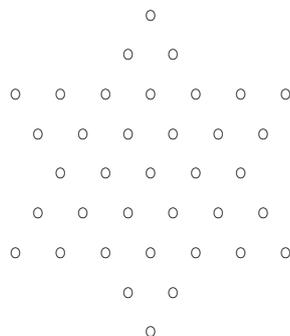
Thirty-seven is the reversal of seventy-three. In addition, thirty-seven is the TWELFTH prime number.....

2 = prime 1, 3 = prime 2, 5 = prime 3, 7 = prime 4, 11 = prime 5, 13 = prime 6,
17 = prime 7, 19 = prime 8, 23 = prime 9, 29 = prime 10, 31 = prime 11, 37 = prime 12

.....and seventy-three is the TWENTY-FIRST prime number.

41 = prime 13, 43 = prime 14, 47 = prime 15, 53 = prime 16, 59 = prime 17,
61 = prime 18, 67 = prime 19, 71 = prime 20, 73 = prime 21

As thirty-seven is the reversal of seventy-three, so twelve is the reversal of twenty-one. Furthermore, as well as being the centred hexagonal number of four, thirty-seven is the dodecagonal number of three. (The only 'star of David' which Scripture contains is the number thirty-seven in II Samuel 23. 39.)



Anyway. We've allowed thirty-seven to represent THE EARTH, and seventy-three to represent THE HEAVENS.

Now we'll read the first verse of Genesis chapter one.

בראשית ברא אלהים את השמים ואת הארץ

(= In the beginning God created the heavens and the earth).

There are ten words in English, but only seven words in Hebrew.

We'll denote the seven Hebrew words of Genesis 1. 1 respectively by the underlined letters A, B, C, D, E, F, and G. The seven words are spelled as follows.

A (beth-resch-aleph-shin-yodh-tau) means 'in the beginning'. All one word, since the preposition is a one-letter prefix. There's no definite article in the original, but even if there was, it would be subsumed in the preposition.

B (beth-resch-aleph) means 'created'.

C (aleph-lamedh-he-yodh-mem) means 'God'.

D (aleph-tau) cannot be construed on its own. It's something like what you call an 'object marker' in Japanese.

E (he-shin-mem-yodh-mem) means 'the heavens'. You ask, *Is there a definite article in the original?* The answer is, Yes, in both E and G. You go on to ask, *Why omit the definite article in A?* The answer is, So as to emphasize the absolute primacy of the first beginning. St John does exactly the same thing, imitating the Hebrew in Greek, when he comes to write the first verse of his gospel.

εν αρχηι (epsilon-nun alpha-rho-chi-eta-iota) = in beginning

F (wau-aleph-tau) combines 'and' with another object marker.

G (he-aleph-resch-tzaddi) means 'the earth'.

Let's add up each of the seven Hebrew words in 400 gematria.

A (beth-resch-aleph-shin-yodh-tau) is two, plus two hundred, plus one, plus three hundred, plus ten, plus four hundred. Nine hundred and thirteen.

B (beth-resch-aleph) is two, plus two hundred, plus one. Two hundred and three.

C (aleph-lamedh-he-yodh-mem) is one, plus thirty, plus five, plus ten, plus forty. Eighty-six.

D (aleph-tau) is one, plus four hundred. Four hundred and one.

E (he-shin-mem-yodh-mem) is five, plus three hundred, plus forty, plus ten, plus thirty. Three hundred and ninety-five.

F (wau-aleph-tau) is six, plus one, plus four hundred. Four hundred and seven.

G (he-aleph-resch-tzaddi) is five, plus one, plus two hundred, plus ninety. Two hundred and ninety-six.

For ease of working we'll set out the seven totals on one line.

$$\underline{A} = 913 \quad \underline{B} = 203 \quad \underline{C} = 86 \quad \underline{D} = 401 \quad \underline{E} = 395 \quad \underline{F} = 407 \quad \underline{G} = 296$$

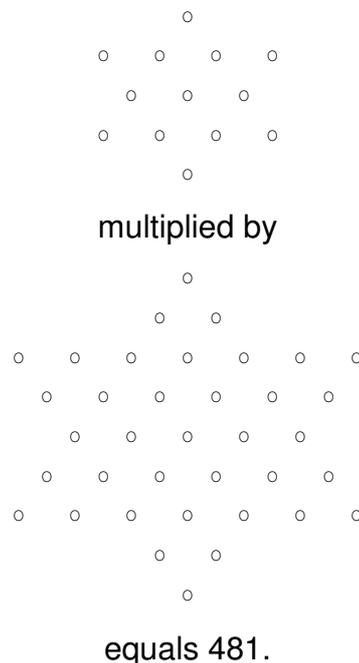
First add up A and C. 913 plus 86 is 999.

Then add up B, D, and E. 203 plus 401 is 604, plus 395 is 999. Same again!

What are the prime factors of 999? Three, three, three, thirty-seven. 999 can be seen in rectangular terms as twenty-seven thirty-sevens.

Add up C and E. 86 plus 395 is 481, which is the stellate number of thirteen.

481 is also thirteen times thirty-seven, or the dodecagonal number of two multiplied by the dodecagonal number of three.



C, E and F add up to 888, which is twenty-four thirty-sevens.

F is eleven thirty-sevens.

G is eight thirty-sevens.

You can see how the number thirty-seven appears over and over again.

$$\underline{A} + \underline{C} \text{ ('in the beginning' + 'God')} = 999 = 27 \times 37$$

$$\underline{B} + \underline{D} + \underline{E} \text{ ('created' + object marker + 'the heavens')} = 999 = 27 \times 37$$

$$\underline{C} + \underline{E} \text{ ('God' + 'the heavens')} = 481 = 13 \times 37$$

$$\underline{C} + \underline{E} + \underline{F} \text{ ('God' + 'the heavens' + 'and' + object marker)} = 888 = 24 \times 37$$

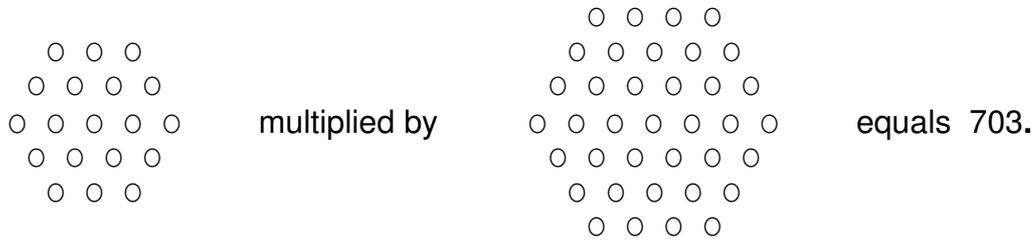
$$\underline{F} \text{ ('and' + object marker)} = 407 = 11 \times 37$$

$$\underline{G} \text{ ('the earth')} = 296 = 8 \times 37$$

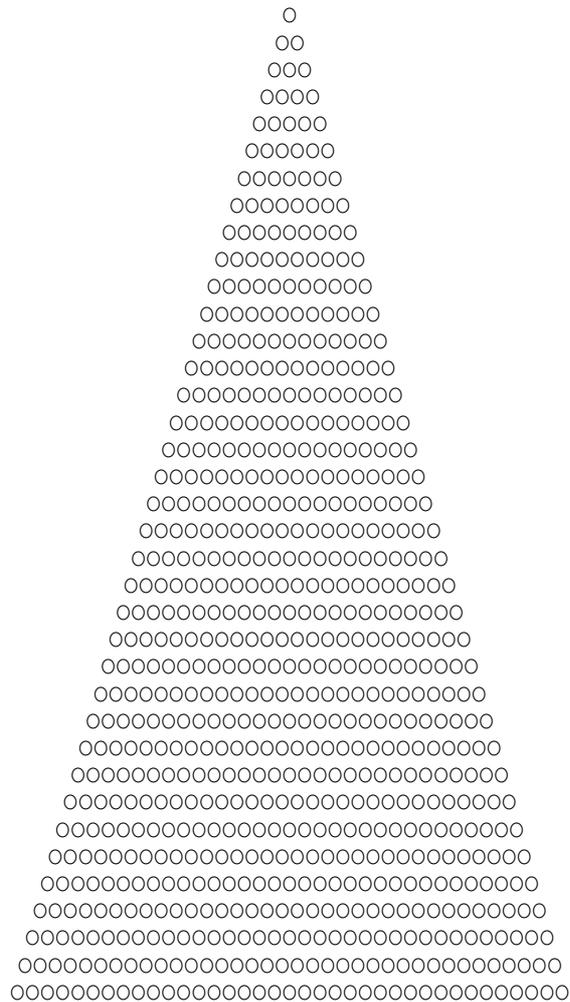
The last two words F and G ('and the earth'), add up to 703.

703 is the product of 19 and 37.

19 and 37 are respectively the centred hexagonal numbers of three and four.



And 703 happens to be the triangular number of thirty-seven.



When we add up all seven numbers, we get 2701.

$$913 + 203 + 86 + 401 + 395 + 407 + 296 = 2701$$

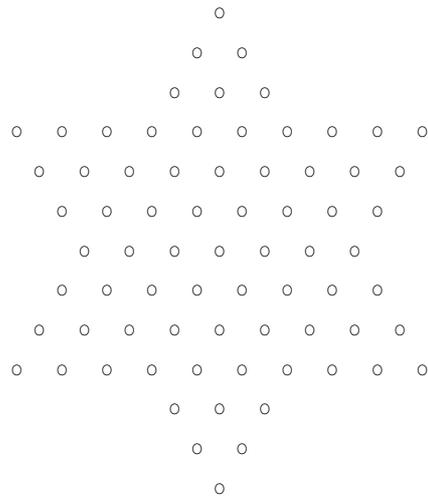
What two prime numbers multiply to give 2701?

Seventy-three and thirty-seven.

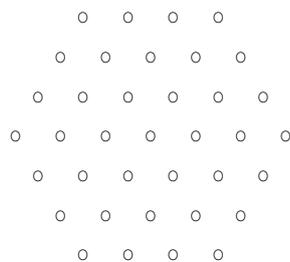
Or, the number seventy-three and its reversal.

Or, the dodecagonal number of four and the centred hexagonal number of four.

Or, the number that we allowed to represent THE HEAVENS, and the number that we allowed to represent THE EARTH.



multiplied by



And there's more. Add 2701 to its own reversal.

$$\begin{array}{r} 2701 \\ 1072 \\ \hline 3773 \end{array}$$

The sum is 3773. What are the prime factors of 2701? Thirty-seven and seventy-three. Those two factors appear in the sum of 2701 and its own reversal.

The number 2701 happens to be the triangular number of seventy-three. I shan't take up most of a page with a graphic display of that fact! Let's move on.

Take the numbers B and D.

B (beth-resh-aleph) is two, plus two hundred, plus one. Two hundred and three.

D (aleph-tau) is one, plus four hundred. Four hundred and one.

Look at what happens when we add the gematric value of each word to its own reversal.

| | | |
|--|---|-----|
| 203 (<u>B</u> : 'created') + its reversal 302 | = | 505 |
| 401 (<u>D</u> : object marker) + its reversal 104 | = | 505 |

Take the numbers E and G.

E (he-shin-mem-yodh-mem) is five, plus three hundred, plus forty, plus ten, plus forty. Three hundred and ninety-five.

G (he-aleph-resh-tzaddi) is five, plus one, plus two hundred, plus ninety. Two hundred and ninety-six.

Once again, look at what happens when we add the gematric value of each word to its own reversal.

| | | |
|--|---|-----|
| 395 (<u>E</u> : 'the heavens') + its reversal 593 | = | 988 |
| 296 (<u>G</u> : 'the earth') + its reversal 692 | = | 988 |

Between B and D, as between E and G, there exists a relationship which we do well to express in purely mathematical language.

| |
|---|
| <p>X is not equal to Y, but</p> <p>[X plus the reversal of X] = [Y plus the reversal of Y].</p> |
|---|

We may come to see in the next life that the process of mirror-imaging has a great deal to do with the governance of the universe. For the present, we shall go some way towards understanding the process if we consider what St Paul says in II Corinthians 3. 18. The four Greek words απο δοξης εις δοξαν mean 'from glory to glory'.

ημεις δε παντες ανακεκαλυμμενωι προσωπωι την δοξαν
Κυριου κατοπτριζομενοι την αυτην εικονα μεταμορφουμεθα
απο δοξης εις δοξαν.....

*But we all, with open face beholding as in a glass the glory of the Lord,
are changed into the same image from glory to glory.....*

We need to know something about Hebrew gematria if we want to understand what St Paul is saying here.

The AV's phrase 'in a glass' means 'in a mirror'.

What does the phrase 'from glory to glory' mean?

It involves numerical *mirror-imaging*.

The Hebrew word for GLORY is spelled kaph-beth-wau-daleth. Read the four Hebrew characters from right to left.

כ ב ו ד

In 22 gematria the four characters have values respectively of eleven, two, six, and four, so the word kaph-beth-wau-daleth adds up to TWENTY-THREE.

In 400 gematria the four characters have values respectively of twenty, two, six, and four, so the word kaph-beth-wau-daleth adds up to THIRTY-TWO.

THIRTY-TWO IS THE REVERSAL, OR MIRROR IMAGE, OF TWENTY-THREE.

| |
|--|
| <p style="text-align: center;">AS IN A GLASS</p> <p style="text-align: center;">23 : 32</p> <p style="text-align: center;">CHANGED INTO THE SAME IMAGE FROM <i>GLORY TO GLORY</i></p> |
|--|

Is that piece of mirror-imaging clear enough?

Then let's go back to Genesis 1. 1.

Look at what happens when we add up the numerical values of A, B, D, E, F, and G -- everything except the word for *God* -- together with their respective reversals.

$$[913 + 203 + 401 + 395 + 407 + 296] + [319 + 302 + 104 + 593 + 704 + 692] = 5329$$

5329 is the square of seventy-three.

Now we've already seen that seventy-three is the 400 gematric value of the Hebrew word for 'wisdom' (cheth-kaph-mem-he).

$$8 + 20 + 40 + 5 = 73$$

What important lesson do we learn from the total value of six numbers and their reversals, *in which God is not represented?*

That the instrumental Wisdom by which the physical universe was made is distinct from God.

Don't get me wrong.

The LORD used his own wisdom, or his knowledge of what would work, when he came to design the material universe.

But before he began the work of physical creation, the LORD made a kind of creature called Wisdom.

If I want to understand what kind of creature Wisdom is, I look at a book by F J Camm which is presently sitting on my study table.

The book was published more than fifty years ago in New York. It bears a title of four words.

MATHEMATICAL TABLES AND FORMULAE

Wisdom is the Creator's living book of tables and formulae. Her job is to articulate not so much what is *possible* as what is *good*.



Wisdom is an operator, or instrumental creature, whom God is pleased to employ. Read Proverbs 8. 24-25, in which Wisdom herself speaks.

באין-תהמות חוללתי באין מעינות נכבדי-מים

(= When there were no depths, I WAS BROUGHT FORTH;
when there were no fountains abounding with water).

בטרם הרים הטבעו לפני גבעות חוללתי

(= Before the mountains were settled,
before the hills WAS I BROUGHT FORTH.....).

Like every other creature, the Wisdom of Proverbs 8 had an origin. I mean to say, Wisdom was BROUGHT FORTH. She tells us so herself. Twice.

Those scholars who protest that the author of Proverbs 8 is 'merely being poetic' should be invited to tell us how much poetry they have seriously studied, for how many years, and in how many different languages. They should also be asked to tell us how many articles on poetry they have published in academic journals.

Let me state a useful rule which 'educated' people are often happy to break. Use the words *aspersion*, *farrago*, *indictment*, *invidious*, *litany*, *livid*, *paradigm*, *parameter*, *plethora*, *prevaricate*, *semantics*, *serried*, *throe*, *travesty*, *watershed*, adjectival *fell*, and *poetic* only if you know exactly what these words mean.

One song declares 'ONWARD!' THE SAILORS CRY, but they don't. Another song declares I SAW THREE SHIPS COME SAILING IN, but you didn't. Are these

nautical declarations 'poetic'? No. To depart from factuality is not to become a poet. So it represents an unpoetical folly to maintain that when Wisdom says

I WAS BROUGHT FORTH,

she really means

I WAS NOT BROUGHT FORTH.

We must beware of the exegetical anchorite whose meagrely furnished mind leads him to turn a piece of Biblical truth into a dull falsehood. The truth is that the Wisdom of Proverbs 8 WAS BROUGHT FORTH. At a certain moment, she came into existence. Before that moment, she did not exist.

At times reading the Bible can be like visiting a foreign country. When wise people visit a foreign country, they conceive ideas on the basis of the realities which they encounter. When foolish people visit a foreign country, they perceive its realities through the lens of their own established ideas.

[To read intelligently is to travel. After finding in a Malay poem the words *kerrenga di dalam buloh* (= red ants in the bamboo), you escape from the rattling dry canes that Europeans buy in their garden centres. And after hearing an Indonesian poet refer to *dingin Eropa* (= the cold of Europe), you escape from your own comfortable notions about your own part of the world.]

Remember what Nabokov wrote about Gogol.

Gogol was a strange creature, but genius is always strange; it is only your healthy second-rater who seems to the grateful reader to be a wise old friend, nicely developing the reader's notion of life.

What can we say about the Wisdom of Proverbs 8?

First, Wisdom is not an abstract noun. Abstract nouns play no serious part in God's economy. In fact, outside the realms of notion and lexicon, abstract nouns which are not earthed in action can have no existence whatever. If goodness is not *active*, it is not goodness. Take away merciful *acts*, and there is no such thing as mercy.

Secondly, Wisdom has nothing to do with wisdom in the narrow vulgar sense of that word (= 'wisdom in the conduct of human relations'). To call a person 'wise', or to say that a person 'has wisdom', should properly be to declare that the person *knows* a lot of different things, and *can do* a lot of different things.

But often the word 'wise' is applied to self-important losers who pronounce oracles on human behaviour from their armchairs.

In some areas of life you can pass for wise merely by cultivating a ponderous demeanour. You read tripe like 'Desiderata', you do nothing, you say little, you smile gravely, and you nod slowly, like a 1960s car-dog. After a lifetime of useless posing, you end up like José Joaquim Alves Pacheco, a fictional character whom I often encounter in the real world. Pacheco was created by the Portuguese author Eça de Queiroz.

Muito bem me lembro da noite (sendo ele Presidente do Conselho) em que, na sala da Condessa do Arrodes, alguém, com fervor, apeteceu conhecer o que S.

Ex.^a pensava de Cánovas del Castillo. Silenciosamente, magistralmente, sorrindo apenas, S. Ex.^a deu com a mão grave, de leve, um corte horizontal no ar.

I can remember clearly one night (he was Prime Minister at the time) when, at a ball given by the Countess of Arrodes, some earnest person wanted to learn what His Excellency thought of Cánovas del Castillo [a cruel and autocratic Spanish politician]. His Excellency said nothing. He merely gave a sagacious smile as with one dignified hand he gently drew a horizontal line in the air.

Bah! The ‘wisdom’ of a Pacheco is the costume of a charlatan. It is because of characters like Pacheco that the noun ‘wisdom’ has become a revoltingly sebaceous word, not least on the lips of church people. Nietzsche once said,

Il faut méditerraniser la musique (= Music needs to be mediterraneanized).

I’m going to rework Nietzsche’s French dictum. Wise men like Pacheco need to be Siberianized, and the word ‘wisdom’ needs to be steam-cleaned.

Listen. I have a very wise friend. He happens to be my mechanic. If something goes wrong with my car, I need the particular wisdom of my friend. What I *don’t* need is some solemn-faced old goat who will shake his head portentously, and then disgorge a nugget of gnomic wisdom beginning with the words, ‘I think perhaps sometimes.....’

Listen again. On many occasions I have worked briefly with stone. Let me give you six less than monumental examples. When I was ten I bored holes in a piece of slate, using a hand-drill with a steel bit. Seven years later I helped a stonemason to split a large granite boulder, using plugs, feathers, and chisels made of hardened steel. In the following year I spent one afternoon working in a stoneyard, and used an enormous machine-saw, whose water-cooled blade was set with diamonds, to cut up blocks of Portland stone. One year later I took four hours to spread five tons of gravel over a path, using a steel-bladed shovel, a steel-headed rake, and a steel-bodied wheelbarrow. More than thirty years after that, while making the first of two fireplaces from tiles of inch-thick slate, I used a carborundum wheel to cut a number of slits in one tile. And not long ago, when I was visiting a factory in Beijing, I used a tiny diamond-bladed machine-tool to engrave characters on a piece of pale green jade. Some kind of *circular motion* is involved in each example. A drill-bit revolves. When you make holes for plugs and feathers in granite with a chisel, you use a ‘tap-and-turn’ technique, rotating the chisel clockwise through ninety degrees after every blow of the hammer. (A boxer’s straight left, by contrast, is a turn-and-tap affair.) The blade of a machine-saw rotates. So does the wheel of a barrow, so does a stone-cutting carborundum wheel, and so does the blade of the engraver that I used in China.

Here’s the point. Whenever certain scholarly gentlemen tell me that the pyramids were made by Egyptians who used only tools of soft copper plus abrasive sand, I KNOW THAT THEY’RE TALKING RUBBISH. Not one of these gentlemen has any experience of working with stone. Some of them would even tell you that when I was working with stone I was foolishly wasting my time. (Should have been sitting in a library, don’t you know.) They themselves are content to be soft-handed theoreticians, so they take no account of what is physically impossible. While repeating the doctrines of those who are ignorant, they despise the experience of those who are not. That is how far from WISDOM these gentlemen are: and they have their counterparts in different areas of the academic world.

The person who has real wisdom expresses a knowledge of *what will work*. For her part the Wisdom of Proverbs 8 expresses the structure of ordered being. Of course she had to exist before anything physical was created.

Before you can have a PHYSICAL CREATION, you need to have God's operator WISDOM in place.

What is the meaning of that sentence? Far more than you and I might ever articulate in the course of our earthly lives. But here is *one part* of its meaning.

Before you can have a PERIODIC TABLE OF THE ELEMENTS, you need to have a NUMERICAL SYSTEM in place.

God allows his creature Wisdom to express the rules of a wonderful game called WHAT WORKS. Wisdom *expresses* the rules. She doesn't *write* the rules. It is Almighty God who writes the rules.

Goethe was correct up to a point when he said in '*Das Göttliche*',

| | |
|---|---|
| <i>Nach ewigen, ehrnen, Großen Gesetzen Müssen wir alle Unseres Daseins Kreise vollenden.</i> | All of us must Complete the circles Of our existence In accordance with great laws Which are eternal, and cast in bronze. |
|---|---|

(Circles again!) In this life we may know Wisdom only according as we examine the Creator's handiwork, and follow the Maker's instructions.

Some of the LORD's rules do appear to be cast in bronze.

The number n multiplied by the number n multiplied by the number n generates the cubic form of which every side is n units long.

Half the length of a musical string will sound an octave higher than the full length of the same string.

The smallest elements of language must have an established running order.

Now the physical universe has its beginning in the WORD.

Those who explore the book of that universe discover a tricameral truth which embraces number, and music, and language.

The first chamber is mathematical.

512 is the cube of eight, and 729 is the cube of nine.

The second chamber is musical.

If the note B is sounded by 512 units of a string's length, then the note F will be sounded by 729 units of the same string's length.

The third chamber is verbal. For the purpose of example we'll depict it in terms of the Hebrew language and 400 gematria.

A single word may encode the number 512.

Psalm 119. 31: בעדותיך (= unto thy testimonies)

beth-ayin-daleth-wau-tau-yodh-kaph (2-70-4-6-400-10-20)

A single word may encode the number 729.

Psalm 122. 7: בארמנותיך (= within thy palaces)

beth-aleph-resh-mem-nun-wau-tau-yodh-kaph (2-1-200-40-50-6-400-10-20)

In Luke 7. 35 the Lord Jesus says,

.....εδικαιωθη η σοφια απο παντων των τεκνων αυτης

(= wisdom is justified of all her children).

The three chambers at which we have glanced contain six 'children': two cubes, two musical notes, and two Hebrew words.

Let me remind you that the 400 gematric value of the Hebrew word for 'wisdom' is seventy-three.

cheth-kaph-mem-he = [8 + 20 + 40 + 5] = 73

If you think back to the 23:32 mirror-image subtext of the expression 'from glory to glory' in II Corinthians 3. 18, you may be inclined to regard the two cubic numbers 512 and 729 as the cubes of two mirror images.

The cube of 2³ is 512, and the cube of 3² is 729.

When you add the cube of eight to the cube of nine.....

$$512 + 729 = 1241$$

.....you can see the two prime factors of the total as representing WISDOM on the one hand, and a piece of 23:32 reflection on the other.

$$1241 = 73 \times [2^3 + 3^2]$$

The smaller of the two prime factors is seventeen, which apart from its mirror-image constitution is the value of the Hebrew word טוב (teth-wau-beth) in both 400 and 22 gematria.

Now the word teth-wau-beth means 'goodness'. Its gematric value of seventeen may be written as the sum of *eight* and *nine* in the following equation.

$$\text{SEVENTY-THREE} \times [\text{EIGHT plus NINE}] = \text{EIGHT cubed plus NINE cubed}$$

Once we express that equation in words, we can learn something about the original creative process.

WISDOM x GOODNESS =
the components of God's creative GOODNESS,
expressed in new dimensions.

It needs to be said that the Hebrew word tau-wau-beth can mean variously 'goodness', 'beauty', 'opulence', and even 'cheerfulness'. If you want to apprehend all four of these meanings you should visit a garden which contains carnations, Virginian stock, roses, and mesembryanthemums.

Now a warning. When believers see flowers in a garden, they worship God. They don't worship the flowers. Likewise, when believers discern the person of Wisdom in Proverbs 8, they worship God. They don't worship Wisdom. Be careful when you're talking to others about the Wisdom of Proverbs 8. NEVER refer to her as 'Lady Wisdom'. Mr and Mrs Thrett, your nasty trouble-making neighbours, will allege that you are feminizing the Deity, or creating a goddess.

The Wisdom of Proverbs 8 is an undivine creature of God. Although her delights are with the sons of men, she herself is not anthropic. She is unembodied, and without conceivable form. In other words, she is a creature of whom no mental picture can be made. She must never be venerated. No prayer may ever be addressed to her. Like the north wind, the fir-tree, and the beaver, she is God's creature.

The Wisdom of Proverbs 8 is God's living instrument of order. She rejoices when we get something right by following the LORD's instructions.

Wisdom is the instrument by which God expresses his goodness in the different dimensions of a universe that is simultaneously numerical, musical, and verbal.

At the beginning of the physical creation, the LORD brought his instrument Wisdom to bear upon what the AV calls 'vanity'.

What number do the seven numerated words of Genesis 1. 1 add up to?

$$913 + 203 + 86 + 401 + 395 + 407 + 296 = 2701$$

And what are the prime factors of 2701?

$$2701 = 73 \times 37$$

You may like to know that the Hebrew word for 'truth' (aleph-mem-tau) has a 400 gematric value of $441 = [7 \times 3 \times 3 \times 7]$, and that $[73 \times 37] + [7 \times 3 \times 3 \times 7] = 3142$.

Seventy-three is the 400 gematric value of the Hebrew word for 'wisdom' (cheth-kaph-mem-he).

$$8 + 20 + 40 + 5 = 73$$

Thirty-seven, the reversal of seventy-three, is the 400 gematric value of the Hebrew word for 'vanity' (he-beth-lamedh).

$$5 + 2 + 30 = 37$$

Using the instrument of WISDOM, God built the physical universe from the raw material of VANITY. Proverbs 3. 19 says,

The LORD by wisdom hath founded the earth.....

What the 'vanity' was we'll see in chapter 26.

2701, the triangular number of seventy-three, is actually *built* on seventy-three.

Seventy-three is the bottom line of the literal triangle.

Creation is built on Wisdom, and Wisdom is greatly concerned with number.

Wisdom is the creature of her Creator. We must realize who the Creator is. At the same time, we must be able to distinguish between the wisdom of God, the wisdom which humans may acquire, and the person of Wisdom.

In Hebrews 1. 2 St Paul says that God

Hath in these last days spoken unto us by his Son, whom he hath appointed heir of all things, by whom also he made the worlds.....

And in Colossians 2. 3 St Paul speaks of the Lord Jesus Christ as the one

In whom are hid all the treasures of wisdom and knowledge.

If we want to get wisdom, we should read Proverbs 9. 10.

The fear of the LORD is the beginning of wisdom.....

And if we fear the LORD, we shan't be afraid to take the Bible seriously. Consider the first command of Psalm 148. 3.

Praise ye him, sun and moon.....

We may read that command in one of two ways.

1. The Psalmist is addressing the sun and moon in the certain knowledge that they can't hear him, and that they will not be able to obey his command. He relies on the sober commentators of a later age to explain his strange language out of existence by declaring that he 'was merely being poetic'. What the Psalmist is saying is stupid, and he *knows* that it's stupid, but he says it anyway.

2. The Psalmist is addressing the sun and moon in the certain knowledge that they *can* hear him, and that in some manner they *will* be able to obey his command. He isn't worried about dull-minded commentators who will try to explain his strange language out of existence. What he's saying is serious, and he knows that it will have some effect in the heavenly realm, so he says it gladly. He regards as WORSE THAN TRIVIAL those commentators who know as little about the nature of the universe as they know about the nature of poetry.

I reckon that the second reading is the only sensible one.

Sun and moon may be affected by words which are spoken or sung on the inhabited earth.

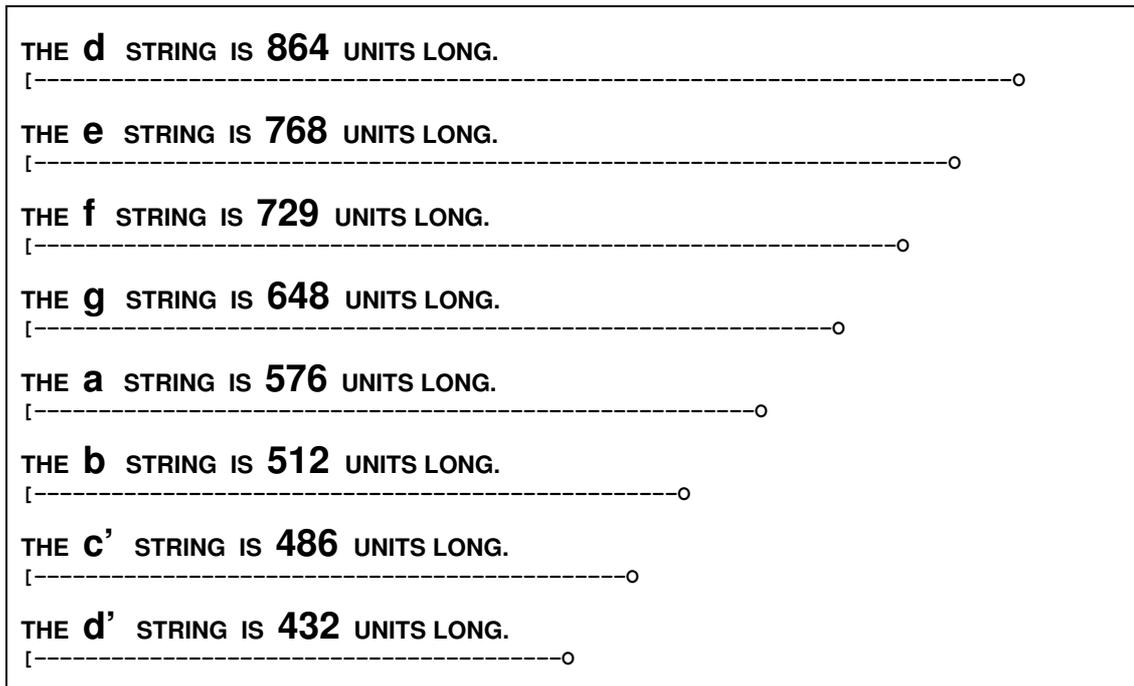
Look at SUN AND MOON as they appear in the Hebrew text of Psalm 148. 3. Read their seven Hebrew letters from right to left.

שמש וירח

SUN is shin-mem-shin. AND is a preficial wau. MOON is yodh-resch-cheth. Add up the seven letters shin, mem, shin, wau, yodh, resh and cheth in 400 gematria.

$$[300 + 40 + 300] + 6 + [10 + 200 + 8] = 864$$

Do you remember the piece of musical physics that we met in chapter 4? If you make an eight-string harp or psaltery which sounds the notes *d*, *e*, *f*, *g*, *a*, *b*, *c'*, and *d'* on strings of equal thickness and tension, your eight strings will need to have unitary lengths respectively of 864, 768, 729, 648, 576, 512, 486, and 432.



The bottom *d*-string is 864 units long, and the top *d'*-string is 432 units long. Here we see exemplified one of the LORD's rules which we have already articulated.

Half the length of a musical string will sound an octave higher than the full length of the same string.

Psalm 148. 3 shows us that SUN AND MOON, which in 400 gematria add up to 864, may be affected by words which are spoken on the INHABITED EARTH.

The Hebrew word for INHABITED EARTH is teth-beth-lamedh. Read the Hebrew letters from right to left.

תבל

In 400 gematria the word teth-beth-lamedh has a value of 432. Add up the three letters teth, beth, and lamedh in 400 gematria.

$$400 + 2 + 30 = 432$$

SUN AND MOON relate to the INHABITED EARTH as bottom *d* relates to top *d'*.

We can express that astonishing fact in a kind of equation.

$$\text{תבל} : \text{שמש וירח} = 864 : 432$$

‘Now hold on,’ says Rosie. ‘You’re saying that in some manner the INHABITED EARTH sounds an octave above SUN AND MOON.’

Correct.

‘Then you’re really saying that what goes on in the HIGHER octave can affect what goes on in the LOWER octave.’

Yes, and a simple fact from musical life will prove what I’m saying. The dazzling Jane Dascey, whom I have painted eight times, has come over to borrow a five-string viola. (You met Miss Dascey as a chain-draped Andromeda in chapter 3.) I’ll ask Jane to show you how an unheard note may affect a heard note.

First Miss Dascey will play the note *c* on the unfingered bottom string of the viola. Then she will put the third finger of her left hand on the *g*-string above as if she meant to play *c*’. And now I’ll ask Jane to do a big vibrato (by shaking her fingertip over the string) while still playing only the bottom *c*-string.

You can hear how the viola’s unfingered *c*-string is picking up the vibration of the UNSOUNDED octave above, and manifesting that vibration powerfully.

‘That’s a miracle!’ Rosie exclaims.

‘It’s nothing of the sort.’ The voice comes from a reader who speaks now for the first time. ‘You’re making a terrible fuss about all that 864-432 stuff. I hold a degree in physics education, and I can’t see that there’s anything musical about the universe.’

I rejoice to learn that we have a physicist on the premises. Let me ask him one question. When he was studying physics at school, and at college, how much attention did he pay to the physics of SOUND?

‘None at all,’ says the physicist disdainfully. ‘We didn’t *do* sound.’

Why not?

‘I don’t know,’ replies the physicist. He thinks hard for a moment. ‘I suppose it wasn’t thought to be important.’

That miserable answer exemplifies a generality. Forty years ago, those who studied physics studied heat, light, and SOUND. Every physics laboratory had a number of ‘sonometers’ on which students would learn how to divide the length of a sounding string. But the time came when sound was banished from the syllabus. In most schools as in many colleges, the study of sound was sent to Coventry. Why? Well, the Seriously Clever People *didn’t think it was important*. So nowadays it’s possible for an apparently qualified physicist to know almost nothing about sound.

(You see the result of sound-free physics teaching whenever you open a popular book about the origin of the universe. Within the first couple of pages you always come across some marvellous stuff about *the sirens of ambulances*.)

The physicist snorts. 'There's no point in talking to people who make fun of the Doppler Effect,' he says. And without a word of valediction, he vanishes.

Let us dispense with ambulances and their sirens. DOPPLER is the German word for 'doubler'. Here is the most important Doppler Effect in the universe.

432 : 864

'Listen,' says Delia. 'Your 864-432 thing reminds me of something that I read not long ago.' She pauses. 'According to legend, Pythagoras wrote characters on a mirror, held it up to the moon, and caused his characters to be reflected on the lunar surface.'

'Leave Pythagoras for a minute, dear,' says Jane Dascey. 'Is there any verse in the Bible that talks specifically about *things on earth* affecting *things in heaven*?'

Yes, there is. Think of Hebrews 9. 23.

It was therefore necessary that THE PATTERNS OF THINGS IN THE HEAVENS should be purified with THESE; but THE HEAVENLY THINGS THEMSELVES with better sacrifices than THESE.

We'll understand that verse more easily if we read it in context (verses 19 to 28).

For when Moses had spoken every precept to all the people according to the law, he took the blood of calves and of goats, with water, and scarlet wool, and hyssop, and sprinkled both the book, and all the people,

Saying, This is the blood of the testament which God hath enjoined unto you.

Moreover he sprinkled with blood both the tabernacle, and all the vessels of the ministry.

And almost all things are by the law purged with blood; and without shedding of blood is no remission.

It was therefore necessary that THE PATTERNS OF THINGS IN THE HEAVENS should be purified with THESE; but THE HEAVENLY THINGS THEMSELVES with better sacrifices than THESE.

For Christ is not entered into the holy places made with hands, which are the figures of the true; but into heaven itself, now to appear in the presence of God for us:

Nor yet that he should offer himself often, as the high priest entereth into the holy place every year with blood of others;

For then must he often have suffered since the foundation of the world: but now once in the end of the world hath he appeared to put away sin by the sacrifice of himself.

And as it is appointed unto men once to die, but after this the judgment:

So Christ was once offered to bear the sins of many; and unto them that look for him shall he appear the second time without sin unto salvation.

Hebrews 9. 23 contains a tremendous weight of truth. Why do so many preachers refuse to explicate this verse condignly? Are they embarrassed by its message, or are they disinclined to work at it?

It is a matter of considerable gravity that 'the patterns of things in the heavens' were purified by Mosaic sacrifices.

It is a matter of SUPREME gravity that 'the heavenly things themselves' were purified by the sacrifice of the Lord Jesus Christ at Calvary.

Once we appreciate the truth of Hebrews 9. 23, we'll be able to understand the first command of Psalm 148. 3.

Praise ye him, sun and moon.....

We'll also be able to understand the verse's *second* command. Let me quote both parts of the verse.

Praise ye him, sun and moon: praise him, all ye stars of light.

The Psalmist is addressing the entire universe. (What does he say? ALL ye stars of light. Not SOME of you. ALL of you.)

There's a well-known hymn which includes the following words.

*Sun and moon, bow down before him;
Dwellers all in time and space.....*

If you ever sing that hymn, think about the meaning of its words, which are partly derived from the third verse of Psalm 148.

Praise ye him, sun and moon: praise him, all ye stars of light.

But lo! A commentator called Colin Tate is standing at the door.

'The author of Psalm 148 was merely being poetic,' he says.

Wrong. Colin Tate the commentator is merely being dull. Only losers want to live in a universe which is as boring as themselves.

And as it happens, the real universe is NOT boring! Listen to the Lithuanian poet Sigita Geda.

*Dzīvnieciska tā auga dvēsele,
Kuru
Neuzminēja Platons.*

The spirit of that plant is animal,
A fact which
Was not guessed by Plato.

There's nothing pantheistic about the real universe. Listen to Psalm 96. 12-13:

*Let the field be joyful, and all that is therein: then shall all the trees of
the wood rejoice Before the LORD: for he cometh, for he cometh to
judge the earth.....*

Who's afraid of what the Bible actually says? Things are ALIVE. Remember the stone and the beam of Habakkuk 2. 11.

*For the stone shall cry out of the wall, and
the beam out of the timber shall answer it.*

Remember the stones of which the Lord Jesus spoke in Luke 19. 39-40.

And some of the Pharisees from among the multitude said unto him, Master, rebuke thy disciples. And he answered and said unto them, I tell you that, if these should hold their peace, the stones would immediately cry out.

Remember Matthew 27. 51, which records how stones *did* cry out in triumph.

And, behold, the veil of the temple was rent in twain from the top to the bottom; and the earth did quake, and the rocks rent.....

Things are ALIVE. Every so often they speak for their Creator. Furthermore, at certain times one physical creature can speak to a very different physical creature. At such times the man or woman who praises God with a willing heart may address the most distant galaxies, WITHOUT ANY TIME-DELAY.

Does it take the sun's light more than eight minutes to reach the earth? Well, you can forget about the Psalmist's command to the sun travelling at the speed of light, and taking more than eight minutes to reach his addressee. You can also forget about the Psalmist's command to all the stars travelling at the speed of light, and taking unmeasurable ages to reach the boundary-line of the universe. In fact, you can expel from your mind the superstition that light is the fastest thing in the universe, because nothing moves faster than thought. Prayer and praise 'depart' and 'arrive' in the same moment. The writer of Psalm 148 is in touch with the whole universe, instantly. So is any man or woman who uses Psalm 148 as a hymn of praise.

Have I been understood? Yes? Then we'll allow the Polish poet Jan Kochanowski to have the last word.

*Tyś pan wszystkiego świata, Tyś niebo zbudował
I złotymi gwiazdami ślicznieś uhaftował;
Tyś fundament założył nieobeszłej ziemi.....*

You are the Lord of the whole world. You built the sky,
And beautifully embroidered it with golden stars;
You established the foundation of the untraversed earth.....



CHAPTER 8: IN THE GREEK TONGUE

八 百 標 兵 奔 北 坡

(= Eight hundred crack troops run to the northern hillside).

Chinese song

.....le chant du Pyrrhonisme, qui contient près de huit cents vers, fut commencé et fini en vingt-quatre heures, sans aucun intervalle.....

(= the canto on Pyrrhonism, which contains nearly eight hundred lines, was started and finished in twenty-four hours, without a break).

Cardinal de Bernis

The Greek alphabet contains twenty-four letters:

alpha, beta, gamma, delta, epsilon, zeta, eta, theta,

iota, kappa, lambda, mu, nu, xi, omicron, pi,

rho, sigma, tau, upsilon, phi, chi, psi, omega.

We call the Greek numerical alphabet of units, tens, and hundreds 'the 800 Greek alphabet' after the value of its final letter. (Think of the 800 Greek alphabet as being the counterpart of what we call 'the 400 Hebrew alphabet'.)

Here is the 800 Greek alphabet. Watch out for the gaps between five and seven, as also between eighty and one hundred! Former alphabetical characters, which will concern us not at all, are used to denote both *six* and *ninety*.

alpha = 1, beta = 2, gamma = 3, delta = 4,

epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,

nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,

phi = 500, chi = 600, psi = 700, omega = 800

In Greek the name of PYTHAGORAS is spelled pi-epsilon-theta-alpha-gamma-omicron-rho-alpha-sigma.

$$80 + 400 + 9 + 1 + 3 + 70 + 100 + 1 + 200 = 864$$

PYTHAGORAS has an 800 gematric value of 864. So does JERUSALEM in the spelling iota-epsilon-rho-omicron-epsilon-sigma-alpha-lambda-eta-mu.

$$10 + 5 + 100 + 70 + 400 + 200 + 1 + 30 + 8 + 40 = 864$$

In Greek the name of CEPHAS (Galatians 2. 9) is spelled kappa-eta-phi-alpha-sigma.

$$20 + 8 + 500 + 1 + 200 = 729$$

CEPHAS has an 800 gematric value of 729. You may already have noticed that 729 can be a number of musical significance.

In Greek the name of the island CLAUDA (Acts 27. 16) is spelled kappa-lambda-alpha-upsilon-delta-alpha, and in 800 gematria it has a value of 456.

$$20 + 30 + 1 + 400 + 4 + 1 = 456$$

In Greek the 'sailors' of Acts 27. 27 (NAUTAI) are spelled nu-alpha-upsilon-tau-alpha-iota. NAUTAI has a value of 762 in 800 gematria.

$$50 + 1 + 400 + 300 + 1 + 10 = 762$$

In Greek the name of CLAUDIA (II Timothy 4. 21) is spelled kappa-lambda-alpha-upsilon-delta-iota-alpha, and it has a value of 466 in 800 gematria.

$$20 + 30 + 1 + 400 + 4 + 10 + 1 = 466$$

In Greek the name of SALOME (Mark 15. 40, Mark 16. 1) is spelled sigma-alpha-lambda-omega-mu-eta, and it has a value of 1079 in 800 gematria.

$$200 + 1 + 30 + 800 + 40 + 8 = 1079$$



Figurate art: 'Salome'

Seven Greek words give us six different numbers which add up to 4356. The number 4356 happens to be the square of sixty-six.

$$864 + 729 + 456 + 762 + 466 + 1079 = 4356 = 66 \times 66$$

4356 is also the total 800 gematric value of John 11. 23.

Jesus saith unto her, Thy brother shall rise again.

Here is the original Greek of that verse.

Λεγει αυτη ο Ιησους, αναστησεται ο αδελφος σου.

The verse contains *eight* Greek words, which I'll print in upper-case letters.

1. ΛΕΓΕΙ 2. ΑΥΘΙ 3. Ο 4. ΙΗΣΟΥΣ
5. ΑΝΑΣΤΗΣΕΤΑΙ 6. Ο 7. ΑΔΕΛΦΟΣ 8. ΣΟΥ

In third and sixth place you see the nominative masculine singular form of the definite article, which normally bears a diacritical mark called a 'rough breathing'. The rough breathing is really a pre-facial aitch, and since it is not part of the Greek alphabet, it concerns the gematrist not at all.

Here once again is the 800 Greek alphabet.

- alpha = 1, beta = 2, gamma = 3, delta = 4,
epsilon = 5, zeta = 7, eta = 8, theta = 9
iota = 10, kappa = 20, lambda = 30, mu = 40,
nu = 50, xi = 60, omicron = 70, pi = 80
rho = 100, sigma = 200, tau = 300, upsilon = 400,
phi = 500, chi = 600, psi = 700, omega = 800

And here are the eight Greek words of John 11. 23, spelled out in English letter-names.

1. [lambda-epsilon-gamma-epsilon-iota] 2. [alpha-upsilon-tau-eta-iota]
3. [omicron] 4. [iota-eta-sigma-omicron-upsilon-sigma]
5. [alpha-nu-alpha-sigma-tau-eta-sigma-epsilon-tau-alpha-iota] 6. [omicron]
7. [alpha-delta-epsilon-lambda-phi-omicron-sigma] 8. [sigma-omicron-upsilon]

See if you can work out the gematric value of each word.

1. _____ 5. _____
2. _____ 6. _____
3. _____ 7. _____
4. _____ 8. _____

Your eight answers, set out consecutively with no spaces between the digits, should look like the product of the following seven numbers.

$$2 \times 3 \times 3 \times 5 \times 7 \times 79 \times 14923 \times 7232856865777 = ?$$

In case you can't be bothered with such a calculation, here is the answer.

5371970888107670810670

Now you can go on to do exactly the same sort of job as you did in chapter 5 with the 400 Hebrew alphabet. At the top of each page you'll see the 800 Greek alphabet, set out as follows.

alpha = 1, beta = 2, gamma = 3, delta = 4,
epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,
nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,
phi = 500, chi = 600, psi = 700, omega = 800

Underneath the alphabet you'll find four columns which you should mentally number 1, 2, 3, and 4, reading from left to right.

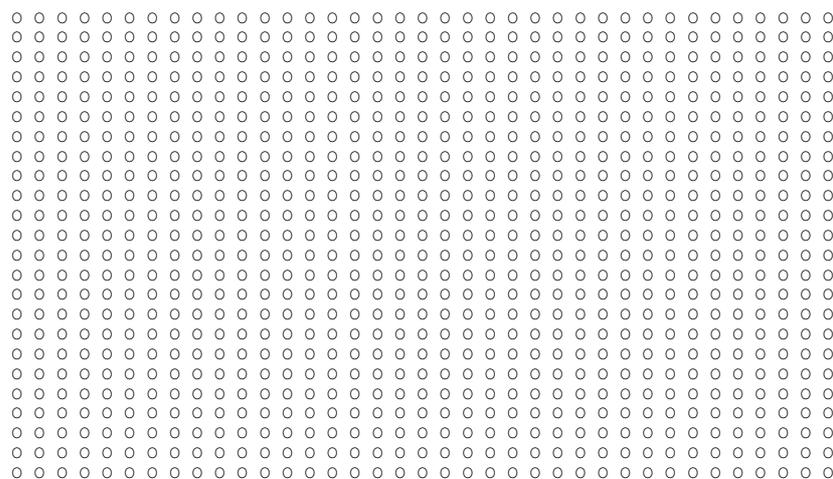
Column 1 contains English words.

Column 2 spells out the corresponding Greek words (without rough breathings).

Column 3 gives you the gematric values of those Greek words.

Column 4 consists of lines on which you should write very lightly in pencil.

Cover up column three with a ruler (use two blobs of Blu-Tack if you're reading at the screen), and add up the words in column two for yourself. One supremely important word is represented in figurate form below.



Write your totals on the lines in column 4.

Once you come to the end of a page, remove the ruler from column 3, and check your totals.

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,
 nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,
 phi = 500, chi = 600, psi = 700, omega = 800

| | | | |
|-----------|---------------------------------------|------|-------|
| good | alpha-gamma-alpha-theta-omicron-sigma | 284 | _____ |
| love | alpha-gamma-alpha-pi-eta | 93 | _____ |
| holy | alpha-gamma-iota-omicron-sigma | 284 | _____ |
| always | alpha-epsilon-iota | 16 | _____ |
| air | alpha-iota-theta-eta-rho | 128 | _____ |
| blood | alpha-iota-mu-alpha | 52 | _____ |
| age | alpha-iota-omega-nu | 861 | _____ |
| salt | alpha-lambda-alpha-sigma | 232 | _____ |
| true | alpha-lambda-eta-theta-eta-sigma | 256 | _____ |
| but | alpha-lambda-lambda-alpha | 62 | _____ |
| lamb | alpha-mu-nu-omicron-sigma | 361 | _____ |
| wind | alpha-nu-epsilon-mu-omicron-sigma | 366 | _____ |
| man | alpha-nu-eta-rho | 159 | _____ |
| worthy | alpha-xi-iota-omicron-sigma | 341 | _____ |
| from | alpha-pi-omicron | 151 | _____ |
| bread | alpha-rho-tau-omicron-sigma | 671 | _____ |
| beginning | alpha-rho-chi-eta | 709 | _____ |
| ruler | alpha-rho-chi-omega-nu | 1551 | _____ |
| star | alpha-sigma-tau-eta-rho | 609 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,
 nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,
 phi = 500, chi = 600, psi = 700, omega = 800

| | | | |
|---------|---------------------------------------|------|-------|
| I throw | beta-alpha-lambda-lambda-omega | 863 | _____ |
| life | beta-iota-omicron-sigma | 282 | _____ |
| I see | beta-lambda-epsilon-pi-omega | 917 | _____ |
| plan | beta-omicron-upsilon-lambda-eta | 510 | _____ |
| ox | beta-omicron-upsilon-sigma | 672 | _____ |
| for | gamma-alpha-rho | 104 | _____ |
| nation | gamma-epsilon-nu-omicron-sigma | 328 | _____ |
| earth | gamma-eta | 11 | _____ |
| I write | gamma-rho-alpha-phi-omega | 1404 | _____ |
| woman | gamma-epsilon-nu-eta | 461 | _____ |
| ten | delta-epsilon-kappa-alpha | 30 | _____ |
| tree | delta-epsilon-nu-delta-rho-omicron-nu | 283 | _____ |
| people | delta-eta-mu-omicron-sigma | 322 | _____ |
| I give | delta-iota-delta-omega-mu-iota | 868 | _____ |
| glory | delta-omicron-xi-alpha | 135 | _____ |
| two | delta-epsilon-omicron | 474 | _____ |
| twelve | delta-omega-delta-epsilon-kappa-alpha | 834 | _____ |
| I | epsilon-gamma-omega | 808 | _____ |
| tribe | epsilon-theta-nu-omicron-sigma | 334 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,
 nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,
 phi = 500, chi = 600, psi = 700, omega = 800

| | | | |
|---------|--|------|-------|
| picture | epsilon-iota-kappa-omega-nu | 885 | _____ |
| peace | epsilon-iota-rho-eta-nu-eta | 181 | _____ |
| hope | epsilon-lambda-pi-iota-sigma | 325 | _____ |
| here | epsilon-nu-theta-alpha-delta-epsilon | 74 | _____ |
| six | epsilon-xi | 65 | _____ |
| work | epsilon-rho-gamma-omicron-nu | 228 | _____ |
| desert | epsilon-rho-eta-mu-omicron-sigma | 423 | _____ |
| it is | epsilon-sigma-tau-iota | 515 | _____ |
| other | epsilon-tau-epsilon-rho-omicron-sigma | 680 | _____ |
| well | epsilon-upsilon | 405 | _____ |
| at once | epsilon-upsilon-theta-epsilon-sigma | 1014 | _____ |
| I have | epsilon-chi-omega | 1405 | _____ |
| Zealot | zeta-eta-lambda-omega-tau-eta-sigma | 1353 | _____ |
| belt | zeta-omega-nu-eta | 865 | _____ |
| we | eta-mu-epsilon-iota-sigma | 263 | _____ |
| day | eta-mu-epsilon-rho-alpha | 154 | _____ |
| death | theta-alpha-nu-alpha-tau-omicron-sigma | 631 | _____ |
| God | theta-epsilon-omicron-nu | 134 | _____ |
| door | theta-epsilon-rho-alpha | 510 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,
 nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,
 phi = 500, chi = 600, psi = 700, omega = 800

| | | | |
|---------|---|------|-------|
| Jesus | iota-eta-sigma-omicron-upsilon-sigma | 888 | _____ |
| garment | iota-mu-alpha-tau-iota-omicron-nu | 481 | _____ |
| fish | iota-chi-theta-upsilon-sigma | 1219 | _____ |
| John | iota-omega-alpha-nu-nu-eta-sigma | 1119 | _____ |
| and | kappa-alpha-iota | 31 | _____ |
| bad | kappa-alpha-kappa-omicron-sigma | 311 | _____ |
| good | kappa-alpha-lambda-omicron-sigma | 321 | _____ |
| head | kappa-epsilon-phi-alpha-lambda-eta | 564 | _____ |
| I steal | kappa-lambda-epsilon-pi-tau-omega | 1235 | _____ |
| bed | kappa-lambda-iota-nu-eta | 118 | _____ |
| girl | kappa-omicron-rho-eta | 198 | _____ |
| world | kappa-omicron-sigma-mu-omicron-sigma | 600 | _____ |
| I hide | kappa-rho-upsilon-pi-tau-omega | 1700 | _____ |
| lord | kappa-upsilon-rho-iota-omicron-sigma | 800 | _____ |
| people | lambda-alpha-omicron-sigma | 301 | _____ |
| word | lambda-omicron-gamma-omicron-sigma | 373 | _____ |
| Luke | lambda-omicron-upsilon-kappa-alpha-sigma | 721 | _____ |
| Matthew | mu-alpha-theta-theta-alpha-iota-omicron-sigma | 340 | _____ |
| Mark | mu-alpha-rho-kappa-omicron-sigma | 431 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,
nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,
phi = 500, chi = 600, psi = 700, omega = 800

| | | | |
|-----------|---------------------------------------|-----|-------|
| no one | mu-eta-delta-epsilon-iota-sigma | 267 | _____ |
| mother | mu-eta-tau-eta-rho | 456 | _____ |
| small | mu-iota-kappa-rho-omicron-sigma | 440 | _____ |
| dead | nu-epsilon-kappa-rho-omicron-sigma | 445 | _____ |
| new | nu-epsilon-omicron-sigma | 325 | _____ |
| cloud | nu-epsilon-phi-epsilon-lambda-eta | 598 | _____ |
| wood | xi-upsilon-lambda-omicron-nu | 610 | _____ |
| road | omicron-delta-omicron-sigma | 344 | _____ |
| I know | omicron-iota-delta-alpha | 85 | _____ |
| house | omicron-iota-kappa-omicron-sigma | 370 | _____ |
| I see | omicron-rho-alpha-omega | 971 | _____ |
| mountain | omicron-rho-omicron-sigma | 440 | _____ |
| crowd | omicron-chi-lambda-omicron-sigma | 970 | _____ |
| child | pi-alpha-iota-delta-iota-omicron-nu | 225 | _____ |
| alongside | pi-alpha-rho-alpha | 182 | _____ |
| every | pi-alpha-sigma | 281 | _____ |
| father | pi-alpha-tau-eta-rho | 489 | _____ |
| Paul | pi-alpha-upsilon-lambda-omicron-sigma | 781 | _____ |
| five | pi-epsilon-nu-tau-epsilon | 440 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,
nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,
phi = 500, chi = 600, psi = 700, omega = 800

| | | | |
|---------|---------------------------------------|------|-------|
| around | pi-epsilon-rho-iota | 195 | _____ |
| faith | pi-iota-sigma-tau-iota-sigma | 800 | _____ |
| full | pi-lambda-eta-rho-eta-sigma | 426 | _____ |
| ship | pi-lambda-omicron-iota-omicron-nu | 310 | _____ |
| spirit | pi-nu-epsilon-upsilon-mu-alpha | 576 | _____ |
| city | pi-omicron-lambda-iota-sigma | 390 | _____ |
| river | pi-omicron-tau-alpha-mu-omicron-sigma | 761 | _____ |
| foot | pi-omicron-upsilon-sigma | 750 | _____ |
| first | pi-rho-omega-tau-omicron-sigma | 1450 | _____ |
| root | rho-iota-zeta-alpha | 118 | _____ |
| trumpet | sigma-alpha-lambda-pi-iota-nu-xi | 431 | _____ |
| miracle | sigma-eta-mu-epsilon-iota-omicron-nu | 383 | _____ |
| tent | sigma-kappa-eta-nu-eta | 286 | _____ |
| wisdom | sigma-omicron-phi-iota-alpha | 781 | _____ |
| mouth | sigma-tau-omicron-mu-alpha | 611 | _____ |
| body | sigma-omega-mu-alpha | 1041 | _____ |
| saviour | sigma-omega-tau-eta-rho | 1408 | _____ |
| end | tau-epsilon-lambda--omicron-sigma | 605 | _____ |
| I place | tau-iota-theta-eta-mu-iota | 377 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 7, eta = 8, theta = 9

iota = 10, kappa = 20, lambda = 30, mu = 40,
 nu = 50, xi = 60, omicron = 70, pi = 80

rho = 100, sigma = 200, tau = 300, upsilon = 400,
 phi = 500, chi = 600, psi = 700, omega = 800

| | | | |
|---------|---|------|-------|
| someone | tau-iota-sigma | 510 | _____ |
| tyrant | tau-upsilon-rho-alpha-nu-nu-omicron-sigma | 1171 | _____ |
| son | upsilon-iota-omicron-sigma | 680 | _____ |
| hymn | upsilon-mu-nu-omicron-sigma | 760 | _____ |
| I carry | phi-epsilon-rho-omega | 1405 | _____ |
| friend | phi-iota-lambda-omicron-sigma | 810 | _____ |
| flame | phi-lambda-omicron-xi | 660 | _____ |
| fear | phi-omicron-beta-omicron-sigma | 842 | _____ |
| voice | phi-omega-nu-eta | 1358 | _____ |
| light | phi-omega-sigma | 1500 | _____ |
| Christ | chi-rho-iota-sigma-tau-omicron-sigma | 1480 | _____ |
| soul | psi-upsilon-chi-eta | 1708 | _____ |
| hour | omega-rho-alpha | 901 | _____ |
| as | omega-sigma | 1000 | _____ |

Phase one of your Greek gematric course ends with a puzzle. There are two forms of the Greek word for 'Nazareth'. One form is spelled nu-alpha-zeta-alpha-rho-epsilon-THETA. The other form is spelled nu-alpha-zeta-alpha-rho-epsilon-TAU. Furthermore, the name of 'Luke' in Greek is spelled lambda-omicron-epsilon-kappa-alpha-sigma. And finally, the Greek word for 'feast' is spelled epsilon-gamma-kappa-alpha-iota-nu-iota-alpha. Add up the 800 gematric values of the four Greek words which have been spelled out in this paragraph, halve the total, and prepare to face *phase* two of your Greek gematric course.

CHAPTER 9: FOUR AND TWENTY IN NUMBER

Cethror ar fichet láech (= Twenty-four warriors).

Táin Bó Cúailnge

二 十 四 橋 明 月 夜

(= The Twenty-Four Bridges, night, a bright moon!

玉 人 何 處 教 吹 簫

In that setting the Jade Ones give their panpipe-lessons).

Du Mu

Bid the sly urchin from your door,

To come again at twenty-four.....

Lady Blessington, *The Belle of a Season*

I'm expecting a visit from my cleaning lady, so our work today will be done in the kitchen. We've seen already that the Greek alphabet contains twenty-four letters:

alpha, beta, gamma, delta, epsilon, zeta, eta, theta,

iota, kappa, lambda, mu, nu, xi, omicron, pi,

rho, sigma, tau, upsilon, phi, chi, psi, omega.

The counterpart of the 22 Hebrew alphabet is what we call 'the 24 Greek alphabet' after the value of its final letter. This alphabet is completely regular, with no gaps for you to worry about.

alpha = 1, beta = 2, gamma = 3, delta = 4,

epsilon = 5, zeta = 6, eta = 7, theta = 8

iota = 9, kappa = 10, lambda = 11, mu = 12,

nu = 13, xi = 14, omicron = 15, pi = 16

rho = 17, sigma = 18, tau = 19, upsilon = 20,

phi = 21, chi = 22, psi = 23, omega = 24

(Hark, the doorbell! Jane Dascey has come over to borrow a marine trumpet.)

Let me remind you that the name of PYTHAGORAS is spelled pi-epsilon-theta-alpha-gamma-omicron-rho-alpha-sigma.

I wonder what PYTHAGORAPHOBIA might be. A fear of snakes in the marketplace? Wouldn't suit anyone who had to go shopping in Beijing! Sorry, I'm being bad. What are we meant to be doing? Oh, yes. We're meant to be adding up the name of PYTHAGORAS in 24 gematria. Well, let's do it.

$$16 + 20 + 8 + 1 + 3 + 15 + 17 + 1 + 18 = 99$$

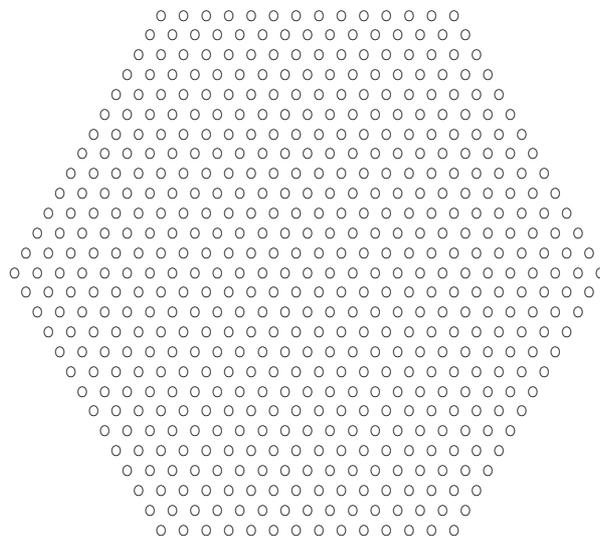
PYTHAGORAS has a 24 gematric value of 99, a glorious number about which we shall say nothing, for the good reason that aside from Luke 15. 4 *there is nothing whatever to be said*. Mathematicians in Beijing write the name of Pythagoras

畢 達 哥 拉 斯,

using characters respectively of 11, 13, 10, 8, and 12 strokes. See how the total number of strokes (fifty-four) combines with its reversal (forty-five) to give you another glorious ninety-nine. Now let me employ eight words of W S Gilbert.

I probably shall not exclaim as I die

the fact that the prime factors of the number 111310812 are 2, 2, 3, 3, 53, 227, and 257, or the fact that these seven prime numbers add up to 547, which apart from being the centred hexagonal number of fourteen.....



.....is the 800 English gematric value of PAMELA LEE ANDERSON. Pythagoras had a thing about *squares*, so let us observe that the Chinese word for 'square', 正方形, comprises the three characters 正 (FIVE strokes), 方 (FOUR strokes), and 形 (SEVEN strokes). There you see. Everything is everything else. QED.

Enough! That was a note for your four mad friends from chapter 1.

Now back to work. In Greek the name of CEPHAS (Galatians 2. 9) is spelled kappa-eta-phi-alpha-sigma, and in 24 gematria it has a value of fifty-seven.

$$10 + 7 + 21 + 1 + 18 = 57$$

In Greek the name of the island CLAUDA (Acts 27. 16) is spelled kappa-lambda-alpha-upsilon-delta-alpha, and in 24 gematria it has a value of 47.

$$10 + 11 + 1 + 20 + 4 + 1 = 47$$

In Greek the 'sailors' of Acts 27. 27 (NAUTAI) are spelled nu-alpha-upsilon-tau-alpha-iota. NAUTAI has a value of 63 in 24 gematria.

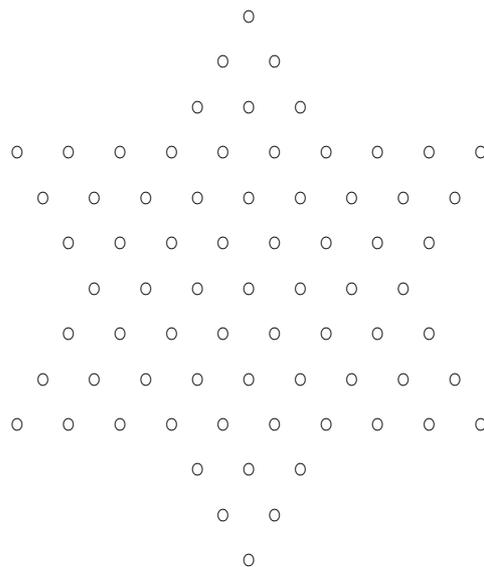
$$13 + 1 + 20 + 19 + 1 + 9 = 63$$

In Greek the name of CLAUDIA (II Timothy 4. 21) is spelled kappa-lambda-alpha-upsilon-delta-iota-alpha, and it has a value of 56 in 24 gematria.

$$10 + 11 + 1 + 20 + 4 + 9 + 1 = 56$$

In Greek the name of SALOME (Mark 15. 40, 16. 1) is spelled sigma-alpha-lambda-omega-mu-eta, and it has a value of 73 in 24 gematria.

$$18 + 1 + 11 + 24 + 12 + 7 = 73$$



Figurate art: 'Salome'

In Greek the word for 'bed' is spelled kappa-lambda-iota-nu-eta, and it has a value of 50 in 24 gematria.

$$10 + 11 + 9 + 13 + 7 = 50$$

The seven Greek words which we have numerated so far (respectively as 99, 57, 47, 63, 56, 73, and 50) have a total gematric value of 445.

Aside from being the product of the fifth and the eleventh post-zero Fibonacci numbers, the number 445 is the sum of the reversals of the first thirteen primes.

$$2 + 3 + 5 + 7 + 11 + 31 + 71 + 91 + 32 + 92 + 13 + 73 + 14 = 445$$

In case you can't be bothered to perform such a calculation, here's the answer.

33561587111157553

Now you can go on to do exactly the same sort of job as you did in chapter 6 with the 22 Hebrew alphabet. At the top of each page you'll see the 24 Greek alphabet, set out as follows.

alpha = 1, beta = 2, gamma = 3, delta = 4,

epsilon = 5, zeta = 6, eta = 7, theta = 8

iota = 9, kappa = 10, lambda = 11, mu = 12,

nu = 13, xi = 14, omicron = 15, pi = 16

rho = 17, sigma = 18, tau = 19, upsilon = 20,

phi = 21, chi = 22, psi = 23, omega = 24

Underneath the alphabet you'll find four columns which you should mentally number 1, 2, 3, and 4, reading from left to right.

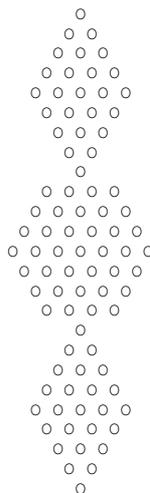
Column 1 contains English words.

Column 2 spells out the corresponding Greek words (without rough breathings).

Column 3 gives you the gematric values of those Greek words.

Column 4 consists of lines on which you should write very lightly in pencil.

Cover up column three with a ruler (use two blobs of Blu-Tack if you're reading at the screen), and add up the words in column two for yourself. One supremely important word is represented in figurate form below.



Write your totals on the lines in column 4.

Once you come to the end of a page, remove the ruler from column 3, and check your totals.

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 6, eta = 7, theta = 8

iota = 9, kappa = 10, lambda = 11, mu = 12,
 nu = 13, xi = 14, omicron = 15, pi = 16

rho = 17, sigma = 18, tau = 19, upsilon = 20,
 phi = 21, chi = 22, psi = 23, omega = 24

| | | | |
|-----------|---------------------------------------|----|-------|
| good | alpha-gamma-alpha-theta-omicron-sigma | 46 | _____ |
| love | alpha-gamma-alpha-pi-eta | 28 | _____ |
| holy | alpha-gamma-iota-omicron-sigma | 46 | _____ |
| always | alpha-epsilon-iota | 15 | _____ |
| air | alpha-iota-theta-eta-rho | 42 | _____ |
| blood | alpha-iota-mu-alpha | 23 | _____ |
| age | alpha-iota-omega-nu | 47 | _____ |
| salt | alpha-lambda-alpha-sigma | 31 | _____ |
| true | alpha-lambda-eta-theta-eta-sigma | 52 | _____ |
| but | alpha-lambda-lambda-alpha | 24 | _____ |
| lamb | alpha-mu-nu-omicron-sigma | 59 | _____ |
| wind | alpha-nu-epsilon-mu-omicron-sigma | 64 | _____ |
| man | alpha-nu-eta-rho | 38 | _____ |
| worthy | alpha-xi-iota-omicron-sigma | 57 | _____ |
| from | alpha-pi-omicron | 32 | _____ |
| bread | alpha-rho-tau-omicron-sigma | 70 | _____ |
| beginning | alpha-rho-chi-eta | 47 | _____ |
| ruler | alpha-rho-chi-omega-nu | 77 | _____ |
| star | alpha-sigma-tau-eta-rho | 62 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 6, eta = 7, theta = 8

iota = 9, kappa = 10, lambda = 11, mu = 12,
 nu = 13, xi = 14, omicron = 15, pi = 16

rho = 17, sigma = 18, tau = 19, upsilon = 20,
 phi = 21, chi = 22, psi = 23, omega = 24

| | | | |
|---------|---------------------------------------|----|-------|
| I throw | beta-alpha-lambda-lambda-omega | 49 | _____ |
| life | beta-iota-omicron-sigma | 44 | _____ |
| I see | beta-lambda-epsilon-pi-omega | 58 | _____ |
| plan | beta-omicron-upsilon-lambda-eta | 55 | _____ |
| ox | beta-omicron-upsilon-sigma | 55 | _____ |
| for | gamma-alpha-rho | 21 | _____ |
| nation | gamma-epsilon-nu-omicron-sigma | 54 | _____ |
| earth | gamma-eta | 10 | _____ |
| I write | gamma-rho-alpha-phi-omega | 66 | _____ |
| woman | gamma-epsilon-nu-eta | 43 | _____ |
| ten | delta-epsilon-kappa-alpha | 20 | _____ |
| tree | delta-epsilon-nu-delta-rho-omicron-nu | 71 | _____ |
| people | delta-eta-mu-omicron-sigma | 56 | _____ |
| I give | delta-iota-delta-omega-mu-iota | 62 | _____ |
| glory | delta-omicron-xi-alpha | 34 | _____ |
| two | delta-epsilon-omicron | 39 | _____ |
| twelve | delta-omega-delta-epsilon-kappa-alpha | 48 | _____ |
| I | epsilon-gamma-omega | 32 | _____ |
| tribe | epsilon-theta-nu-omicron-sigma | 59 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 6, eta = 7, theta = 8

iota = 9, kappa = 10, lambda = 11, mu = 12,
 nu = 13, xi = 14, omicron = 15, pi = 16

rho = 17, sigma = 18, tau = 19, upsilon = 20,
 phi = 21, chi = 22, psi = 23, omega = 24

| | | | |
|---------|--|----|-------|
| picture | epsilon-iota-kappa-omega-nu | 61 | _____ |
| peace | epsilon-iota-rho-eta-nu-eta | 58 | _____ |
| hope | epsilon-lambda-pi-iota-sigma | 59 | _____ |
| here | epsilon-nu-theta-alpha-delta-epsilon | 36 | _____ |
| six | epsilon-xi | 19 | _____ |
| work | epsilon-rho-gamma-omicron-nu | 53 | _____ |
| desert | epsilon-rho-eta-mu-omicron-sigma | 74 | _____ |
| it is | epsilon-sigma-tau-iota | 51 | _____ |
| other | epsilon-tau-epsilon-rho-omicron-sigma | 79 | _____ |
| well | epsilon-upsilon | 25 | _____ |
| at once | epsilon-upsilon-theta-epsilon-sigma | 71 | _____ |
| I have | epsilon-chi-omega | 51 | _____ |
| Zealot | zeta-eta-lambda-omega-tau-eta-sigma | 92 | _____ |
| belt | zeta-omega-nu-eta | 50 | _____ |
| we | eta-mu-epsilon-iota-sigma | 51 | _____ |
| day | eta-mu-epsilon-rho-alpha | 42 | _____ |
| death | theta-alpha-nu-alpha-tau-omicron-sigma | 75 | _____ |
| God | theta-epsilon-omicron-nu | 41 | _____ |
| door | theta-epsilon-rho-alpha | 46 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 6, eta = 7, theta = 8

iota = 9, kappa = 10, lambda = 11, mu = 12,
 nu = 13, xi = 14, omicron = 15, pi = 16

rho = 17, sigma = 18, tau = 19, upsilon = 20,
 phi = 21, chi = 22, psi = 23, omega = 24

| | | | |
|---------|--|-----|-------|
| Jesus | iota-eta-sigma-omicron-upsilon-sigma | 87 | _____ |
| garment | iota-mu-alpha-tau-iota-omicron-nu | 78 | _____ |
| fish | iota-chi-theta-upsilon-sigma | 77 | _____ |
| John | iota-omega-alpha-nu-nu-eta-sigma | 85 | _____ |
| and | kappa-alpha-iota | 20 | _____ |
| bad | kappa-alpha-kappa-omicron-sigma | 54 | _____ |
| good | kappa-alpha-lambda-omicron-sigma | 55 | _____ |
| head | kappa-epsilon-phi-alpha-lambda-eta | 55 | _____ |
| I steal | kappa-lambda-epsilon-pi-tau-omega | 85 | _____ |
| bed | kappa-lambda-iota-nu-eta | 50 | _____ |
| girl | kappa-omicron-rho-eta | 49 | _____ |
| world | kappa-omicron-sigma-mu-omicron-sigma | 88 | _____ |
| I hide | kappa-rho-upsilon-pi-tau-omega | 106 | _____ |
| lord | kappa-upsilon-rho-iota-omicron-sigma | 89 | _____ |
| people | lambda-alpha-omicron-sigma | 45 | _____ |
| word | lambda-omicron-gamma-omicron-sigma | 62 | _____ |
| Luke | lambda-omicron-upsilon-kappa-alpha-sigma | 75 | _____ |
| Matthew | mu-alpha-theta-theta-alpha-iota-sigma | 57 | _____ |
| Mark | mu-alpha-rho-kappa-omicron-sigma | 73 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 6, eta = 7, theta = 8

iota = 9, kappa = 10, lambda = 11, mu = 12,
 nu = 13, xi = 14, omicron = 15, pi = 16

rho = 17, sigma = 18, tau = 19, upsilon = 20,
 phi = 21, chi = 22, psi = 23, omega = 24

| | | | |
|-----------|---------------------------------------|----|-------|
| no one | mu-eta-delta-epsilon-iota-sigma | 55 | _____ |
| mother | mu-eta-tau-eta-rho | 62 | _____ |
| small | mu-iota-kappa-rho-omicron-sigma | 81 | _____ |
| dead | nu-epsilon-kappa-rho-omicron-sigma | 78 | _____ |
| new | nu-epsilon-omicron-sigma | 51 | _____ |
| cloud | nu-epsilon-phi-epsilon-lambda-eta | 62 | _____ |
| wood | xi-upsilon-lambda-omicron-nu | 73 | _____ |
| road | omicron-delta-omicron-sigma | 52 | _____ |
| I know | omicron-iota-delta-alpha | 29 | _____ |
| house | omicron-iota-kappa-omicron-sigma | 67 | _____ |
| I see | omicron-rho-alpha-omega | 57 | _____ |
| mountain | omicron-rho-omicron-sigma | 65 | _____ |
| crowd | omicron-chi-lambda-omicron-sigma | 81 | _____ |
| child | pi-alpha-iota-delta-iota-omicron-nu | 67 | _____ |
| alongside | pi-alpha-rho-alpha | 35 | _____ |
| every | pi-alpha-sigma | 35 | _____ |
| father | pi-alpha-tau-eta-rho | 60 | _____ |
| Paul | pi-alpha-upsilon-lambda-omicron-sigma | 81 | _____ |
| five | pi-epsilon-nu-tau-epsilon | 58 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 6, eta = 7, theta = 8

iota = 9, kappa = 10, lambda = 11, mu = 12,
 nu = 13, xi = 14, omicron = 15, pi = 16

rho = 17, sigma = 18, tau = 19, upsilon = 20,
 phi = 21, chi = 22, psi = 23, omega = 24

| | | | |
|---------|---------------------------------------|-----|-------|
| around | pi-epsilon-rho-iota | 47 | _____ |
| faith | pi-iota-sigma-tau-iota-sigma | 89 | _____ |
| full | pi-lambda-eta-rho-eta-sigma | 76 | _____ |
| ship | pi-lambda-omicron-iota-omicron-nu | 79 | _____ |
| spirit | pi-nu-epsilon-upsilon-mu-alpha | 67 | _____ |
| city | pi-omicron-lambda-iota-sigma | 69 | _____ |
| river | pi-omicron-tau-alpha-mu-omicron-sigma | 96 | _____ |
| foot | pi-omicron-upsilon-sigma | 69 | _____ |
| first | pi-rho-omega-tau-omicron-sigma | 109 | _____ |
| root | rho-iota-zeta-alpha | 33 | _____ |
| trumpet | sigma-alpha-lambda-pi-iota-nu-xi | 82 | _____ |
| miracle | sigma-eta-mu-epsilon-iota-omicron-nu | 79 | _____ |
| tent | sigma-kappa-eta-nu-eta | 55 | _____ |
| wisdom | sigma-omicron-phi-iota-alpha | 64 | _____ |
| mouth | sigma-tau-omicron-mu-alpha | 65 | _____ |
| body | sigma-omega-mu-alpha | 55 | _____ |
| saviour | sigma-omega-tau-eta-rho | 85 | _____ |
| end | tau-epsilon-lambda--omicron-sigma | 68 | _____ |
| I place | tau-iota-theta-eta-mu-iota | 64 | _____ |

alpha = 1, beta = 2, gamma = 3, delta = 4,
 epsilon = 5, zeta = 6, eta = 7, theta = 8

iota = 9, kappa = 10, lambda = 11, mu = 12,
 nu = 13, xi = 14, omicron = 15, pi = 16

rho = 17, sigma = 18, tau = 19, upsilon = 20,
 phi = 21, chi = 22, psi = 23, omega = 24

| | | | |
|---------|---|-----|-------|
| someone | tau-iota-sigma | 46 | _____ |
| tyrant | tau-upsilon-rho-alpha-nu-nu-omicron-sigma | 116 | _____ |
| son | upsilon-iota-omicron-sigma | 62 | _____ |
| hymn | upsilon-mu-nu-omicron-sigma | 78 | _____ |
| I carry | phi-epsilon-rho-omega | 67 | _____ |
| friend | phi-iota-lambda-omicron-sigma | 74 | _____ |
| flame | phi-lambda-omicron-xi | 61 | _____ |
| fear | phi-omicron-beta-omicron-sigma | 71 | _____ |
| voice | phi-omega-nu-eta | 65 | _____ |
| light | phi-omega-sigma | 63 | _____ |
| Christ | chi-rho-iota-sigma-tau-omicron-sigma | 118 | _____ |
| soul | psi-upsilon-chi-eta | 72 | _____ |
| hour | omega-rho-alpha | 42 | _____ |
| as | omega-sigma | 42 | _____ |

Four out of the last five chapters have consisted of exercises in Hebrew and Greek gematria. Chapters 3 and 4 prepared you for these exercises by making you engage with many examples of gematria in the English language. (Have certain supercilious readers left all the exercises undone? Then *let them beg through life*, as Edward says in the old Scots ballad. Only a musician who has performed contrapuntal exercises is qualified to judge the counterpoint of a particular composer: and only a reader who has performed gematric exercises is qualified to judge most of the chapters which follow.)

Here is something which you may not realize. The diligent work that you've done so far has taken you to a new level of intellectual sophistication. I mean to say, you've had to work in SIX different numerical alphabets! One of these days you're going to feel like the reformed academic who discovers, after going to the gym for three months, that he can run up the seven flights of the library stairs without effort. Give yourself a quick test now. Look at Job 30. 31, and count the twenty-five letters of the Hebrew text, reading from right to left.

וִיהִי לְאֵבֶל כְּנֹרִי וְעִגְבִּי לְקוֹל בְּכִים

(= My harp also is turned to mourning, and my organ into the voice of them that weep).

Each of the two words containing underlined letters has a sufficial yodh (a tiny letter which floats in the air). That yodh means MY. The second of these two words has a preficial wau (a letter which looks like an upside-down golf-club). That wau means AND. Mind the third letter (he) and the nineteenth letter (qoph)! Like the Russian letter ы (= y), each of these Hebrew letters is made up of two pieces.

The Hebrew word for 'harp' is כְּנֹר (kaph-nun-resh), and the Hebrew word for 'organ' is עִגְבִּי (ayin-gimel-beth).

Write here _____ the 400 Hebrew gematric value of כְּנֹר.

Write here _____ the 22 Hebrew gematric value of כְּנֹר.

Write here _____ the 400 Hebrew gematric value of עִגְבִּי.

Write here _____ the 22 Hebrew gematric value of עִגְבִּי.

Now we'll set out part of the Greek text of John 13. 29.

ΤΙΝΕΣ ΓΑΡ ΕΔΟΚΟΥΝ ΕΠΕΙ ΤΟ ΓΛΩΣΣΟΚΟΜΟΝ ΕΙΧΕΝ Ο ΙΟΥΔΑΣ

(= For some of them thought, because Judas had the bag.....).

The sixth and longest of the nine Greek words is γλωσσοκομον (gamma-lambda-omega-sigma-sigma-omicron-kappa-omicron-mu-omicron-nu).

In the AV John's word γλωσσοκομον is rendered 'bag', but it really means 'reed-box' (that is, a box in which the reeds of a musical instrument are kept).

Write here _____ the 800 Greek gematric value of γλωσσοκομον.

Write here _____ the 24 Greek gematric value of γλωσσοκομον.

All six of your answers, set out consecutively, should look like the product of the following four numbers.

$$2 \times 3 \times 10000687 \times 45073157 = ?$$

In case you can't be bothered to perform such a calculation, here's the answer.

2704575211553154

Did you score full marks? Then celebrate. Get Rosie to make you an Ulster Fry consisting of bacon, eggs, beef sausages, soda-bread farls, potato bread, pancakes, mushrooms, baked beans, and tomatoes. Oh, and tell her to ignore any emasculated nonsense that she may have heard about sunflower oil. Everything has to be fried in lard. Before you eat, read Job 30. 29-31 in the AV.

29 *I am a brother to dragons, and a companion to owls.*

30 *My skin is black upon me, and my bones are burned with heat.*

31 *My harp also is turned to mourning, and my organ into the voice of them that weep.*

Beware of the commentator who characterizes these verses as 'poetic'. People who know NOTHING about poetry often use the word 'poetic' to signify that a writer doesn't really mean what he is saying. Job *does* mean what he is saying. In verse 29 he says that his fellow-humans regard him much as they regard undesirable members of the animal creation. In verse 30 he tells us two things about his physical affliction. And in verse 31 he reveals himself to be a player of two different musical instruments.

Let me repeat something that I said not long ago at an academic conference in King's College London. Job owns the skin and bones of which he speaks in verse 30. It is only possible that he also owns the harp and organ of which he speaks in verse 31. 'Being poetic' doesn't come into it. Is Job an unmusical man who suddenly begins to talk about HIS harp and HIS organ? Of course not. With equal sense and poeticism a completely unsporty man might say, 'My football has been punctured, and my tennis shoes have lost their soles.'

Job was both a harper and an organist, and he tells us something remarkable about his 'organ'. Whereas his 'harp' becomes a singular 'mourning', his 'organ' becomes 'the voice of THEM that weep'. Do you see the point? Not 'the voice of HIM that weeps', or 'the voice of HER that weeps'. THE VOICE OF THEM THAT WEEP. Plural. Harmony. More than one note sounding at the same time.

Always look out for the *real objects* in Scripture. Don't spend your time worrying about abstract nouns. Whenever you find a specific real thing in the Bible, study it, and see what tale it has to tell.

Job was certainly a musician, and Judas Iscariot may well have been a musician. I reckon that Judas was a part-time player of the reed-pipe before he became a disciple of the Lord Jesus.

'If Judas Iscariot was a musician,' says Delia, 'he can be linked with the Satan who is described at the end of Ezekiel 28. 13.' She points to a page.

מלאכת תפיד ונקבִיד בך ביום הבראך כונונו

(= the workmanship of thy tabrets and of thy pipes was prepared in thee in the day that thou wast created).

‘Tabrets and pipes are *real things*,’ Delia continues, ‘and there are more *real things* in the earlier part of the verse.’ She points.

בעדן גן אלהים היית כל אבן יקרה מסכתך אדם פטדה
ויהלם תרשיש שהם וישפה ספיר נפך וברקת וזהב

(= *Thou hast been in Eden the garden of God; every precious stone was thy covering, the sardius, topaz, and the diamond, the beryl, the onyx, and the jasper, the sapphire, the emerald, and the carbuncle, and gold*).

‘Precious stones,’ says Jane Dascey.

‘And gold,’ you add.

‘Yes!’ says Delia. ‘But these real things may be symbols of other real things.’

‘What other real things do you mean?’ asks Rosie.

‘The sun and the nine planets,’ answers Delia.

At once you see what Delia has in mind. Ezekiel 28. 13 contains *a yellow metal* and *nine precious stones*. The one metal is as different in quality from the nine stones as the sun is different in quality from the nine planets. Start at *gold* (= THE SUN), and read backward. The carbuncle is MERCURY, the emerald is VENUS, and the sapphire is EARTH (‘the blue planet’). You recall Job 28. 5–6a:

ארץ ממנה יצא לחם ותחתיה נהפך כמו אש

(= *As for the EARTH, out of it cometh bread: and under it is turned up as it were fire*).

מקום ספיר אבניה

(= *The stones of it are the place of SAPPHIRES.....*).

The jasper is MARS, the onyx is JUPITER, and the beryl is SATURN.

The diamond is URANUS, the topaz is NEPTUNE, and the sardius is PLUTO.

‘Did Ezekiel know what he was saying?’ asks Jane Dascey.

‘I don’t know,’ Delia replies. ‘He was certainly inspired.’ She pauses. ‘Anyway, there may be more to the whole business of consciousness than people realize.’

‘Sometimes I wonder if the communicative system of the universe is a two-way thing,’ says Jane tentatively. She looks into the distance, and thinks for a moment. ‘Here’s what I mean. Today a Biblical author sings, *Praise ye him, sun and moon: praise him, all ye stars of light*. Tomorrow some of the heavenly bodies may sing back to that author.’ Miss Dascey pauses. ‘With information.’ She smiles. ‘I really must run. Thanks for letting me invade your discussion.’

As I show Jane out I notice a Chinese painting in the hall, and remember a poem by Wang Wei. Then I wonder if Wang Wei would have agreed with Jane. I’ll print a black-and-white photograph of the said painting overleaf.



獨 坐 幽 篁 裡

Among the peaceful bamboos I sit alone.

彈 琴 復 長 嘯

I keep playing the same long flute-like note on my lute.

深 林 人 不 知

The glade is deep. People do not understand.

明 月 來 相 照

The moon sings back to me with clear light.

Several translators take the third line to mean, *People don't know that I'm here in the deep glade*. By importing the idea of the author's presence, they make the line banal, and miss the point of an altogether musical poem.

The *bamboos* are musical notes, or unitary string-lengths. The *flute-like note* is an octave harmonic, which the French call *un flageolet*. (If you pluck a guitar-string while touching its exact midpoint lightly with a fingertip, you will produce the octave harmonic.) The *glade* is the musical universe, understood by only a few, in which a heavenly body may *sing back* to a human musician.

'That's exactly what was in my mind,' says Rosie happily as she rises to her feet. 'Oooohhhh! I have to leave now, and so does Whittaker. We're going to a pipe-band concert.' She rubs her eyes. 'If I promise to bring you a bag of Ausonia potatoes next week, will you give me a photocopy of that poem before we go?'

Two minutes later I escort Rosie and her beloved to the front door. Out in the street Merlin Rhodes Byatt, a local church elder of sorts, is addressing perfect clones of Peter Swanwick and P W Botha. 'I think perhaps sometimes,' he says. A passing car denies the rest of his oracle to posterity. 'Race gender class,' barks a lunatic woman from the other side of the street. And lo! My cleaning lady, whose name escapes me for the moment, has arrived on her motortrike.

I walk back to the kitchen. Delia washes half a pound of mushrooms. Then she tosses them in a cloth, sets them out on the breadboard, and chops them.

At length she speaks. 'I'm *free*,' she says quietly. 'I've escaped.'

From what?

'From occultism,' Delia replies. 'You must have noticed that for the last three months I've been pretty well insane.' She takes half a pound of lard out of the fridge. 'I can hardly believe now how much I've allowed myself to be *influenced*.'

Who influenced you?

'The people whom I work with,' Delia answers. 'Nearly all of them. Let me tell you about it, dear.' She pauses. 'The whole theatrical profession is riddled with occultism, and especially with a sort of pop-cabbalism in which anything goes, apart from God.' She walks over to the stove, and puts a two-ounce piece of lard in the frying-pan. 'I didn't realize how vulnerable I was. You see, until three days ago I believed everything that you believe, but without any kind of personal commitment. So I was really open to attack.' Miss Benn moves the piece of lard around the pan with a knife. 'That's only one part of what I've learned. Here's another part. It doesn't matter how clever you are, or how stupid you are. Unless you engage in continual warfare, you're *bound* to be influenced by the people whom you work with, even if some of those people are very bad.'

Yes! I've noticed that myself. Sometimes in my own speaking, and also in my own thinking, I've been able to hear unholy echoes of several persons who are unworthy of imitation.

'Then you'll understand what I'm going to tell you.' Delia is keeping her eyes on the pan. 'All my life I had detested superstition. You know that. Then suddenly, three months ago, I felt impelled to investigate what most of my colleagues were up to. I decided to do some of the things that *they* were doing, in the expectation that none of these things would work. It surprised me to find that a number of them *did* work, up to a point! And before long I was hooked. Oh, I didn't do anything terribly gross. But the things which I *did* do were bad enough. I got interested in different forms of divination. My friend Bessie Gosling taught me to believe that there was no such thing as coincidence. Soon I became addicted to numerology and English gematria. Bessie taught me about pentagonal numbers. I was delighted to learn that many evangelical Christians were merrily obsessed with sevens, and Bible codes, and English gematria. That seemed to make it all right, and *safe*.' Delia pauses. 'Last week I had a revelation, which to begin with was merely intellectual. Bessie writes a numerology column for a New Age journal. People find out their *significant figure* by taking the digital root of their birth-dates. Then they ask Bessie to read their fortune on the basis of this significant figure. It's so embarrassingly stupid. As you know, dear, I was born in 1982 on the twenty-second day of the tenth month, so my significant figure is the digital root of $1 + 9 + 8 + 2 + 2 + 2 + 1 + 0$, which is seven. Well! I happened to be with Bessie when she was going through her mail at home. Two of her correspondents had been born on the same day as I. But one gave the date as 22. 10. 1982, with a digital root of seven, and the other gave the date as 22. 10. 82, with a digital root of six. I watched to see what Bessie would do. She astonished me by putting the first letter in her *sevens* tray, and the second letter in her *sixes* tray! I pointed out that the two correspondents had been born on exactly the same day. Bessie said that it didn't matter, and that people's perceptions of themselves were far more important than sterile facts. At once I

was able to see the whole business of numerology for the charlatan peep-show that it was. And in the same moment I remembered the charlatan peep-shows that I helped to create several years ago, when I worked as a model.'

Delia sets down her knife. 'I've never really told you much about that part of my life before,' she says. 'You know the Hawaiian proverb: *A'a i ka hula, waiho ka hilahila i ka hale* (= If you want to dance the hula, leave your bashfulness at home). When I was on the catwalk, I refused to be guided by that proverb. I maintained my own standards of behaviour, largely by taking nothing to do with anyone. My first employer was Béla Kuraković. He came from Belgrade. Bela was a chaste gentleman, a formidable linguist, a prodigiously literate Anglophile, and a *wild* occultist. His three great passions were drawing polygons, watching the sky at night, and sailing his yacht.' Miss Benn pauses. 'He always wore a kind of Prospero-robe when he was working. On the back of this robe were embroidered four words of the Serbian poet Jovan Dučić: *Poznat pitagorist, zvezdar, moreplovac* (= a famous Pythagorean, an astronomer, a navigator). One day I called my employer *Beowulf of Beograd*, which he thought was terribly clever. As a reward he taught me the elements of Tibetan!' Delia laughs. 'Anyway. In August Béla would go off sailing with his altogether Junonian wife-and-muse. While on board he would work day and night to create artistic pieces of swimwear for the January shows. Fair enough, you might think. But the shows themselves were orgies of madness. Forty seconds before I was due to go out on the catwalk, Béla would be fussing round me in a panic. "*Non, ça ne marche pas*," he would say. Working at high speed with a great pair of scissors, he would make tiny alterations to my exiguous habiliments. Then I would go out and model garments which had a number of *raw scissored edges*. So would all the other models. It was insane! What the man laboured for months to create, he vandalized in seconds with a pair of scissors. *The perfectionism of a great artist*, people in the agency used to say. At first I believed them, because the agency was so successful. I made an enormous amount of money by working in Béla's world, without ever lowering my own standards of decency. But one day I came to see that Béla's reputation was based on bombast, and on delusion.' Delia pauses. 'It was the same with my friend and her numerology. As soon as I heard Bessie say that perceptions were more important than facts, I realized that my intelligence was being horribly insulted.

'Then the revelation became spiritual. To me it appeared that my own soul, and the souls of my occultist colleagues, had been colonized by obscene maggots.' Delia puts the chopped mushrooms into the pan. 'I wish I could expunge those detestable maggots from my memory. They were fat, and filthy, and altogether contemptuous of their hosts. I was nearly overwhelmed by their loathsome appearance.' Miss Benn rinses the breadboard under a stream of cold water. 'After a moment I perceived that our *personal* maggots were members of a great army. I saw the putrefying corpse of Western intellectual life. It had been colonized by an enormous multitude of maggot psychologists, maggot sociologists, and maggot educationists. University departments of language and literature were being eaten up by feminist maggots and postcolonial maggots. Famous departments of *English* literature were becoming homes for the miserable maggots of Minoritarian Studies.' Delia shivers. 'Anyway! Bessie brought my vision to an end by telling me brightly that in Swahili *nane* meant 'eight', and *tano* meant 'five'. I fled from her house and came out into glorious

sunlight, repenting of every wrong thing that I had ever done. Not far away, a blue bus had stopped to pick up passengers. On the panel below its back window it bore a verse of Scripture. Do you know what the verse was? Acts 16. 31. I read that verse, and obeyed it at once.' Delia smiles like a happy child. 'Now I'm clean, and safe, and *free*.' She begins to stir the mushrooms.

Wonderful news should change the person who receives it. When a man hears what is partly a story of repentance, he should look to see if there is anything in his own life of which he needs to repent. I'm ashamed to say that I treated Delia with something like derision in chapter 4. Furthermore, her story moves me to tell a tale that I have never told to anyone before.

Years ago, in a spirit of hilarious research, I began to study the works of a French poet who specialized in divination. Before long I came to perceive that the man's poems possessed a colossal gravity, and that they were intricately correct in relation to all kinds of historical events. Was I engaging in occultism by studying the man's poems meticulously? *No, of course not*, I said to myself, *you are merely acquainting yourself with a certain department of French literature*. For more than three months I lived in a state of complete addiction. Whenever I was analyzing the prophetic French poems I felt such a fierce delight in my own company as I had never felt before.

'That's exactly what I felt when I was working at divination,' says Delia. 'It was like a kind of warm glow. But neither of us was *generating* that fierce delight. We were both picking up the feelings of the maggot.' She pauses. 'What made you stop?'

A realization that the whole thing was wrong, and ultimately useless. I didn't have any abominable revelation, and even now I'm not wise enough to abominate the study in which I was engaged. But there is one French poet whose works I must never read again. When curious people ask me if they should read the works of that French poet, I always say: read the Bible, and read John Buchan.

'Amen,' says Miss Benn. 'People need to read healthy honest literature.' She pauses. 'They also need to read in a healthy honest way. I mean, if you read *any* piece of literature in the manner of an occultist, you'll find undesirable things.'

Oh, I know. Look at the opening line of Shakespeare's eighteenth sonnet. When you start reading on the first letter and leave seven-letter gaps, like the 'Bible-code' people, you get the name of J M Barrie's character SMEE.

SHALL I COMPARE THEE TO A SUMMER'S DAY?

'Stop fooling and listen.' Delia pauses. 'One night Béla got me to model what he called his Bird-of-Paradise swimsuit. It became very popular on the Côte d'Azur. Anyway! At the *après*-show poolside party, Béla quoted and translated a famous line of Vojislav Ilić, who died in 1894. *Ali će, k'o rajski feniks, sinuti sloboda mila* (= Yet the freedom which we cherish will blaze forth, like the paradisaical phoenix).'

Was he paying you an extravagant compliment?

'So I thought at first. Not that it would have been *extravagant*.' Miss Benn favours me with an altogether Junonian smile. 'Alas for my vanity. While I was trying to look paradisaical and humble at the same time, Béla explained that the Serbian words *sloboda mila* referred arcanelly to Slobodan Milošević!'

That reminds me. Whittaker has four Shakespeare-loving friends who refuse to believe that there is any such thing as coincidence. One day these four worthies attacked me in a public library. At the time I happened to have two unrelated pieces of literature on my table. Number one was Dante, *Inferno* XXII. 121, which begins *Lo Navarrese* (= The Navarrese). Number two was a celebrated line of the Uzbek poet Alisher Navoi, in which the author reminds himself of how formerly he made it his business to acquire wisdom. The line begins *Ilm, Navoiy* (= Wisdom, Navoi). Whittaker's friends knew neither Italian nor Uzbek, but they insisted that *Ilm, Navoiy* was 'in some significant way' related to *Lo Navarrese*. One of them even made a lunatic connection between Dante *Alighieri* and *Alisher Navoi*! I thought at once of Thurston Dart (a diligent and audacious British scholar who played a leading rôle in the early music revival). Dart once proposed that the Italian composer Marco Antonio Cavazzoni and the Spanish composer Antonio de Cabezón were brothers.

'Maybe the actress Greta Cavazzoni is related to Marco Antonio Cavazzoni.' Delia performs a perfect *fouetté*. 'And maybe the Italian poet Eugenio Montale is a brother of the Venezuelan poet Eugenio Montejo.' She pauses. 'Now listen, dear! For the last two weeks I've eaten very little. I'm *three pounds underweight*. Furthermore, after breakfast today I was visited by a lunatic from the art college who told me that he was a "pro-active postcolonial feminist". The brute wanted me to stand for a whole hour beside an altar, wearing the shells of half a scallop and two limpets, while he delivered a public lecture on Hesione. I told him to go away. Then I had to address a group of illiterate ladies who believed themselves to be "feminist writers". They were all rather frightful. Ranting in ungrammatical English, and generally gashing themselves with knives according to their manner. Did you know that the *dénouement* is evil because it appeals to a male notion of pleasure?' Delia shrieks with laughter. 'Oh, listen. One of my quasi-male colleagues has let me down, so you and I have been invited to take part in a *horrendous* charity event later this year. It'll be in Crumlin.' She pauses. 'Put on Brandenburg Five, dear. Then stir the mushrooms for me while I empty my bag.'

I obey both commands. From her bag Miss Benn produces first about thirty pounds of red riverbank clay, and then a tin box containing all the materials for two medium-sized Ulster Fries. (Six rashers of naturally cured English bacon. Two steak sausages. Six small tomatoes, provided by Rosie's father. Two eggs. Two small soda-bread farls. Four pieces of potato bread. Two cornmeal cakes. One small tin of baked beans.) And there I was telling myself to be content with half a panful of mushrooms! Delia's home-made cornmeal cakes take the place of what in Northern Ireland are called 'pancakes', and they represent her only gastronomic concession to America. People are different. Rosie spent a year in Connecticut, and came back with an interest in Major League Baseball. Delia spent a fortnight in New York, and came back with a liking for cornmeal cakes.

While everything is being fried, we listen to the fifth and sixth of Bach's Brandenburg Concertos. Here is a fact of which many readers are aware. J S Bach brings health and order and joy to body and mind and soul. Sometimes I wonder if Bach was the biggest person in world history after the New Testament writers. Bach is important. And so is food! You know the three-word dictum of Descartes that clever people make such a fuss about.

Cogito, ergo sum (= I think, therefore I am).

I'm not a tremendously clever person, so I've never been content with the idea of *thinking* as a touchstone of existence. It strikes me as far more sensible to say, *Friticulas Ulvesteranas comedo, ergo sum* (= I eat an Ulster Fry, therefore I am).

In a moment Delia will ask me to give thanks. When I see what she's putting on my well-heated plate, I recall a sentence from John Buchan's *Witch Wood*.

Mr Muirhead said a lengthy grace, which, since he sniffed the savour from the kitchen, he began appropriately with "Bountiful Jehovah."

Truly God is good to Israel. Tonight's fry is going to be a two-pints-of-tea job.

In chapter 10 we'll employ our knowledge of Hebrew and Greek gematria as we address a difficult Biblical question to which no satisfactory answer has ever been given. I'll be working from Snaith's edition of the Hebrew Bible. If you feel that you're ready to buy a Hebrew Bible of your own, let me recommend that you buy the Snaith version. Whether or not you wear spectacles, it's a good idea to read the Hebrew text with the help of a large magnifying glass, because some of the printed letters are hard to distinguish. I'll speak more robustly about the matter of printed Hebrew characters when we come to chapter 18.

TO ANY OCCULTISTS WHO HAVE READ THUS FAR

In 1961 I helped to establish 'The Black Brethren', an exclusive fraternity which later changed its name to 'The Demons of Fire'. Each of the fraternity's two members was nine years old. The Second World War obsessed us both. My father's RAF greatcoat was the eternal guardian of an upstairs cupboard, and even in 1961 the comics that British boys read could be shockingly anti-German. ('*Herr Hauptmann*, shall ve attack ze Englanders?' '*Nein*. Shoot ze stretcher-bearers. Zey are unarmed.') For more than a year the Dyarchs of the Black Brethren communicated with each other in thick German accents. On Saturday afternoons we would attend a free film-show in the Ulster Museum. Many of the films that we saw there had to do with local industry, because Belfast used to lead the world in producing ships, rope, linen, and cigarettes, but every show ended with one episode of a 1940s serial. I still remember *The Green Archer*. (Last week a student from the art college called Julia Arden gave me the whole thing on two DVDs.) In the second episode a grave message was delivered to a certain character by arrow. ***Beware! The Man You Are Working For Is Doomed. Watch Your Step. The Green Archer.***

Nearly half a century later, as I address myself to adult practitioners of occultism, that message comes before me with great force. Listen! Do you imagine that Biblical gematria can help the unproductive industries of Babylon? Is that why you're reading ***THE LORD SHALL COUNT?*** Then stop now. There's a war on, and it's real. Whatever occult fraternities you join, whatever occult rituals you perform, whatever occult studies you pursue, you are serving on the losing side under a *Hauptmann* who is doomed, and you don't have the excuse that you are only nine years old. In John 3. 19 the Lord Jesus says, '.....this is the condemnation, that light is come into the world, and men loved darkness rather than light, because their deeds were evil.' Why choose to be damned? You will get no thanks and no affection from the Prince of Darkness for doing so. Leave the Black Brethren. Verses 9 and 105 of Psalm 119 will help you to 'watch your step'.

CHAPTER 10: HE SHALL BE CALLED A NAZARENE

Ye seek Jesus of Nazareth.....

Mark 16. 6

Yesterday Delia brought me a load of fresh red clay from a local riverbank. At present I am sieving the stuff. Next week I shall make some of it into a bowl. A question occurs to me while I work. The answer to that question will compose much of chapter 10. Where does Nahum make his first appearance in the Bible? *On the contents page.* Unremarkable, you may think. But regard what follows.

The Hebrew Bible is divided into three sections: the Law, the Prophets, and the Writings.

THE LAW

Genesis, Exodus, Leviticus, Numbers, Deuteronomy

THE PROPHETS

Joshua, Judges, I Samuel, II Samuel, I Kings, II Kings (*'Prophetae Priores'*)

Isaiah, Jeremiah, Ezekiel, Hosea, Joel, Amos, Obadiah, Jonah, Micah, Nahum, Habakkuk, Zephaniah, Haggai, Zechariah, Malachi (*'Prophetae Posteriores'*)

THE WRITINGS

Psalms, Proverbs, Job, Song of Solomon, Ruth, Lamentations, Ecclesiastes, Esther, Daniel, Ezra, Nehemiah, I Chronicles, II Chronicles

If we leave aside the *numerical* alephs and beths which are used to mark the first and second books of Samuel and Kings, we find that **ONE HUNDRED LETTERS** are used to spell the names of the prophetic books, as follows.

| | |
|----------|------------------------------------|
| JOSHUA | yodh-he-wau-shin-ayin |
| JUDGES | shin-wau-pe-teth-yodh-mem |
| SAMUEL | shin-mem-wau-aleph-lamedh |
| SAMUEL | shin-mem-wau-aleph-lamedh |
| KINGS | mem-lamedh-kaph-yodh-mem |
| KINGS | mem-lamedh-kaph-yodh-mem |
| ISAIAH | yodh-shin-ayin-yodh-he |
| JEREMIAH | yodh-resh-mem-yodh-he |
| EZEKIEL | yodh-cheth-zayin-qoph-aleph-lamedh |
| HOSEA | he-wau-shin-ayin |
| JOEL | yodh-wau-aleph-lamedh |

| | |
|-----------|------------------------------|
| AMOS | ayin-mem-wau-samekh |
| OBADIAH | ayin-wau-beth-daleth-yodh-he |
| JONAH | yodh-wau-nun-he |
| MICAH | mem-yodh-kaph-he |
| NAHUM | nun-cheth-wau-mem |
| HABAKKUK | cheth-beth-qoph-wau-qoph |
| ZEPHANIAH | tzaddi-pe-nun-yodh-he |
| HAGGAI | cheth-gimel-yodh |
| ZECHARIAH | zayin-kaph-resh-yodh-he |
| MALACHI | mem-lamedh-aleph-kaph-yodh |

Let us number these letters from 1 to 100.

| | |
|-----------|--|
| JOSHUA | [1 yodh] [2 he] [3 wau] [4 shin] [5 ayin] |
| JUDGES | [6 shin] [7 wau] [8 pe] [9 teth] [10 yodh] [11 mem] |
| SAMUEL | [12 shin] [13 mem] [14 wau] [15 aleph] [16 lamedh] |
| SAMUEL | [17 shin] [18 mem] [19 wau] [20 aleph] [21 lamedh] |
| KINGS | [22 mem] [23 lamedh] [24 kaph] [25 yodh] [26 mem] |
| KINGS | [27 mem] [28 lamedh] [29 kaph] [30 yodh] [31 mem] |
| ISAIAH | [32 yodh] [33 shin] [34 ayin] [35 yodh] [36 he] |
| JEREMIAH | [37 yodh] [38 resh] [39 mem] [40 yodh] [41 he] |
| EZEKIEL | [42 yodh] [43 cheth] [44 zayin] [45 qoph] [46 aleph] [47 lamedh] |
| HOSEA | [48 he] [49 wau] [50 shin] [51 ayin] |
| JOEL | [52 yodh] [53 wau] [54 aleph] [55 lamedh] |
| AMOS | [56 ayin] [57 mem] [58 wau] [59 samekh] |
| OBADIAH | [60 ayin] [61 wau] [62 beth] [63 daleth] [64 yodh] [65 he] |
| JONAH | [66 yodh] [67 wau] [68 nun] [69 he] |
| MICAH | [70 mem] [71 yodh] [72 kaph] [73 he] |
| NAHUM | [74 nun] [75 cheth] [76 wau] [77 mem] |
| HABAKKUK | [78 cheth] [79 beth] [80 qoph] [81 wau] [82 qoph] |
| ZEPHANIAH | [83 tzaddi] [84 pe] [85 nun] [86 yodh] [87 he] |
| HAGGAI | [88 cheth] [89 gimel] [90 yodh] |
| ZECHARIAH | [91 zayin] [92 kaph] [93 resh] [94 yodh] [95 he] |
| MALACHI | [96 mem] [97 lamedh] [98 aleph] [99 kaph] [100 yodh] |

Now look at Matthew 2. 23.

And he came and dwelt in a city called Nazareth: that it might be fulfilled which was spoken by the prophets, He shall be called a Nazarene.

Here is an intractable fact. Not one of the Old Testament prophets says anywhere, 'He shall be called a Nazarene'.

Yet Matthew tells us clearly that the PROPHETS (plural) say so. Is Matthew referring to the use of the word nun-tzaddi-resh (= 'branch') in Isaiah 11.1, or to the word nun-tzaddi-resh-wau-tau (= 'hidden things') in Isaiah 48. 6?

No. Neither of these verses may be understood to include the phrase HE SHALL BE CALLED, and anyway both verses are found in a single prophet.

The English sentence 'He shall be called a Nazarene' renders a pair of four-letter Hebrew words (yodh-qoph-resch-aleph nun-tzaddi-resch-yodh).

In 400 gematria yodh-qoph-resch-aleph (= 'he shall be called') adds up to 311, and nun-tzaddi-resch-yodh (= 'a Nazarene') adds up to 350.

Look at the contents list once again. Letters 40, 80, 93, and 98 spell the word yodh-qoph-resch-aleph (= 'he shall be called'), which in 400 gematria adds up to 311. The sum of 40, 80, 93, and 98 is 311.

| | |
|-----------|--|
| JEREMIAH | [37 yodh] [38 resch] [39 mem] [40 yodh] [41 he] |
| EZEKIEL | [42 yodh] [43 cheth] [44 zayin] [45 qoph] [46 aleph] [47 lamedh] |
| HOSEA | [48 he] [49 wau] [50 shin] [51 ayin] |
| JOEL | [52 yodh] [53 wau] [54 aleph] [55 lamedh] |
| AMOS | [56 ayin] [57 mem] [58 wau] [59 samekh] |
| OBADIAH | [60 ayin] [61 wau] [62 beth] [63 dalet] [64 yodh] [65 he] |
| JONAH | [66 yodh] [67 wau] [68 nun] [69 he] |
| MICAH | [70 mem] [71 yodh] [72 kaph] [73 he] |
| NAHUM | [74 nun] [75 cheth] [76 wau] [77 mem] |
| HABAKKUK | [78 cheth] [79 beth] [80 qoph] [81 wau] [82 qoph] |
| ZEPHANIAH | [83 tzaddi] [84 pe] [85 nun] [86 yodh] [87 he] |
| HAGGAI | [88 cheth] [89 gimel] [90 yodh] |
| ZECHARIAH | [91 zayin] [92 kaph] [93 resch] [94 yodh] [95 he] |
| MALACHI | [96 mem] [97 lamedh] [98 aleph] [99 kaph] [100 yodh] |

Letters 74, 83, 93, and 100 spell nun-tzaddi-resch-yodh (= 'a Nazarene'), which in 400 gematria adds up to 350. The sum of 74, 83, 93, and 100 is 350.

| | |
|-----------|--|
| JEREMIAH | [37 yodh] [38 resch] [39 mem] [40 yodh] [41 he] |
| EZEKIEL | [42 yodh] [43 cheth] [44 zayin] [45 qoph] [46 aleph] [47 lamedh] |
| HOSEA | [48 he] [49 wau] [50 shin] [51 ayin] |
| JOEL | [52 yodh] [53 wau] [54 aleph] [55 lamedh] |
| AMOS | [56 ayin] [57 mem] [58 wau] [59 samekh] |
| OBADIAH | [60 ayin] [61 wau] [62 beth] [63 dalet] [64 yodh] [65 he] |
| JONAH | [66 yodh] [67 wau] [68 nun] [69 he] |
| MICAH | [70 mem] [71 yodh] [72 kaph] [73 he] |
| NAHUM | [74 nun] [75 cheth] [76 wau] [77 mem] |
| HABAKKUK | [78 cheth] [79 beth] [80 qoph] [81 wau] [82 qoph] |
| ZEPHANIAH | [83 tzaddi] [84 pe] [85 nun] [86 yodh] [87 he] |
| HAGGAI | [88 cheth] [89 gimel] [90 yodh] |
| ZECHARIAH | [91 zayin] [92 kaph] [93 resch] [94 yodh] [95 he] |
| MALACHI | [96 mem] [97 lamedh] [98 aleph] [99 kaph] [100 yodh] |

What am I saying? That Matthew has found a cruciform prophecy on the very 'Contents' page of the Hebrew Bible. Each of the two four-letter groups has a total 400 gematric value which is exactly equal to the sum of its four position-in-the-contents numbers.

40 (yodh)

80 (qoph)

74 (nun) 83 (tzaddi) 93 (resh) 100 (yodh)

98 (aleph)

Letter no 40 + letter no 80 + letter no 93 + letter no 98 = 311

yodh-qoph-resh-aleph = 'HE SHALL BE CALLED'

[yodh = 10] + [qoph = 100] + [resh = 200] + [aleph = 1] = 311

Letter no 74 + letter no 83 + letter no 93 + letter no 100 = 350

nun-tzaddi-resh-yodh = 'A NAZARENE'

[nun = 50] + [tzaddi = 90] + [resh = 200] + [yodh = 10] = 350

Matthew's eight-letter prophecy, which uses SIX letters of the Hebrew alphabet, involves the names of SIX prophets: Jeremiah, Nahum, Habakkuk, Zephaniah, Zechariah, and Malachi.

The prophecy is written across a lattice of SIXTY-ONE letters.

The word which means 'he shall be called' adds up in 400 gematria to 311.

The word which means 'a Nazarene' adds up in 400 gematria to 350.

$$311 + 350 = 661$$

The overall total 661 may be seen as alluding felicitously to the SIX contributing prophets, and to the lattice of SIXTY-ONE letters.

Nahum as he appears on the contents page of the Hebrew Bible represents the start of something very big. Perhaps Matthew began to discern the prophecy when he looked at the first letters of the reasonably close neighbours *Nahum* and *Zephaniah*. Nahum's initial NUN is the *first* letter of nun-tzaddi-resh-yodh (= 'a Nazarene'), and Zephaniah's initial TZADDI is the *second* letter of tzaddi-resh-yodh.

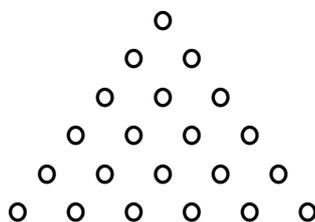
Now look at the 'order numbers' of the six contributing prophets.

| | |
|------------------|------------------------------|
| JOSHUA | is prophet number 1. |
| JUDGES | is prophet number 2. |
| I SAMUEL | is prophet number 3. |
| II SAMUEL | is prophet number 4. |
| I KINGS | is prophet number 5. |
| II KINGS | is prophet number 6. |
| ISAIAH | is prophet number 7. |
| JEREMIAH | is prophet number 8. |
| EZEKIEL | is prophet number 9. |
| HOSEA | is prophet number 10. |
| JOEL | is prophet number 11. |
| AMOS | is prophet number 12. |
| OBADIAH | is prophet number 13. |
| JONAH | is prophet number 14. |
| MICAH | is prophet number 15. |
| NAHUM | is prophet number 16. |
| HABAKKUK | is prophet number 17. |
| ZEPHANIAH | is prophet number 18. |
| HAGGAI | is prophet number 19. |
| ZECHARIAH | is prophet number 20. |
| MALACHI | is prophet number 21. |

$$8 + 16 + 17 + 18 + 20 + 21 = 100$$

The felicitous fact that these 'order numbers' add up to ONE HUNDRED allows the six contributing prophets to represent all twenty-one of the prophetic books, whose names are spelled in ONE HUNDRED letters.

Some readers will want to point out that in the world of triangular numbers, SIX is the basis of TWENTY-ONE (= the number of prophetic books).



A more significant piece of information emerges when we add up the names of all six contributing prophets in both 400 and 22 Hebrew gematria.

The names of the six prophets in 400 gematria

| | | | |
|----------|--|---|-----|
| JEREMIAH | yodh-resh-mem-yodh-he = 10 + 200 + 40 + 10 + 5 | = | 265 |
| NAHUM | nun-cheth-wau-mem = 50 + 8 + 6 + 40 | = | 104 |
| HABAKKUK | cheth-beth-qoph-wau-qoph = 8 + 2 + 100 + 6 + 100 | = | 216 |

| | | | |
|-----------|---|---|-----|
| ZEPHANIAH | tzaddi-pe-nun-yodh-he = 90 + 80 + 50 + 10 + 5 | = | 235 |
| ZECHARIAH | zayin-kaph-resh-yodh-he = 7 + 20 + 200 + 10 + 5 | = | 242 |
| MALACHI | mem-lamedh-aleph-kaph-yodh = 40 + 30 + 1 + 20 + 5 | = | 101 |

$$265 + 104 + 216 + 235 + 242 + 101 = 1163$$

The names of the six prophets in 22 gematria

| | | | |
|-----------|---|---|----|
| JEREMIAH | yodh-resh-mem-yodh-he = 10 + 20 + 13 + 10 + 5 | = | 58 |
| NAHUM | nun-cheth-wau-mem = 14 + 8 + 6 + 13 | = | 41 |
| HABAKKUK | cheth-beth-qoph-wau-qoph = 8 + 2 + 19 + 6 + 19 | = | 54 |
| ZEPHANIAH | tzaddi-pe-nun-yodh-he = 18 + 17 + 14 + 10 + 5 | = | 64 |
| ZECHARIAH | zayin-kaph-resh-yodh-he = 7 + 11 + 20 + 10 + 5 | = | 53 |
| MALACHI | mem-lamedh-aleph-kaph-yodh = 13 + 12 + 1 + 11 + 5 | = | 47 |

$$58 + 41 + 54 + 64 + 53 + 47 = 317$$

What happens when we add the 400 gematric total to the 22 gematric total?

$$1163 + 317 = 1480$$

The names of the six contributing prophets, when added up in both 400 and 22 gematria, give us an overall total of 1480. Matthew would have known that 1480 is the value of the word *Christos* (= 'Christ') in 800 Greek gematria.

$$\text{chi-rho-iota-sigma-tau-omicron-sigma} = 600 + 100 + 10 + 200 + 300 + 70 + 200 = 1480$$

Of course any prophecy which says HE SHALL BE CALLED A NAZARENE raises an important question. WHO shall be called a Nazarene? The number 1480 answers that question. *The Messiah* shall be called a Nazarene. *The Christ* shall be called a Nazarene. In addition, the Christ will be the Son of David. Look at the opening words of Matthew's gospel.

The book of the generation of Jesus Christ, the son of David.....

Then look at the first proper noun in Matthew 2. 23.

And he came and dwelt in a city called Nazareth: that it might be fulfilled which was spoken by the prophets, He shall be called a Nazarene.

The New Testament contains two forms of the Greek word for 'Nazareth'. One form is spelled nu-alpha-zeta-alpha-rho-epsilon-THETA. The other form is spelled nu-alpha-zeta-alpha-rho-epsilon-TAU.

When we open our Greek New Testaments, we find in Matthew 2. 23 the second of these spellings, which has an 800 Greek gematric value of 464.

$$\text{nu-alpha-zeta-alpha-rho-epsilon-tau} = 50 + 1 + 7 + 1 + 100 + 5 + 300 = 464$$

'David' in Hebrew is spelled dalet-waw-dalet (= respectively letters 4, 6, and 4 of the Hebrew alphabet), so Matthew's use of the form nu-alpha-zeta-alpha-rho-epsilon-tau may indicate a deliberate 'Davidization' of the Galilean town.

Now listen to what Peter says in Acts 3. 22.

For Moses truly said unto the fathers, A prophet shall the Lord your God raise up unto you of your brethren, like unto me.....

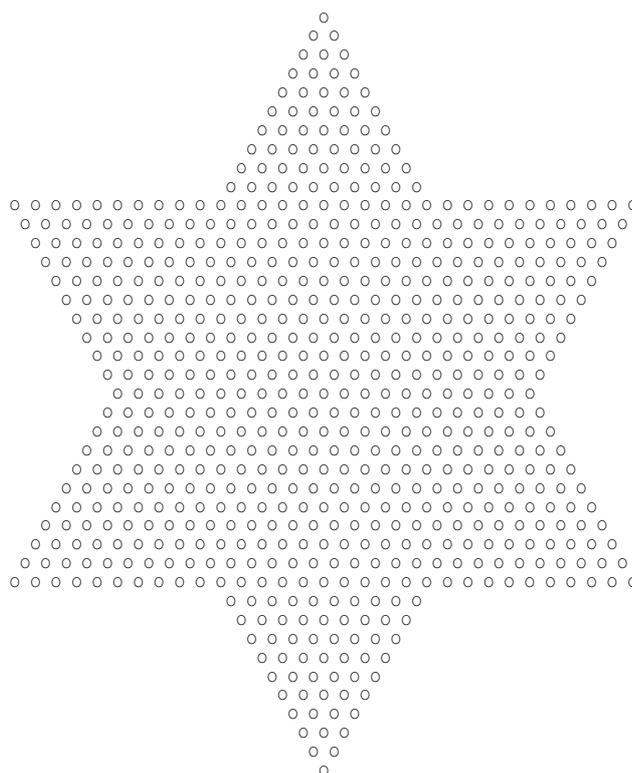
The prophet of whom Moses spoke appears as 'a Nazarene' in Matthew 2. 23.

And he came and dwelt in a city called Nazareth: that it might be fulfilled which was spoken by the prophets, He shall be called a Nazarene.

What is Matthew asking us to do? He is asking us to receive the Nazarene prophet *in the name of each of six Biblical prophets*. If we read chapter 10, verse 41 of his gospel, we shall hear Matthew quoting the words of the Lord Jesus.

He that receiveth a prophet in the name of a prophet shall receive a prophet's reward....

Let us observe an eloquent felicity. Although one hundred Hebrew letters are used to spell the names of the prophetic books, the 'Nazarene' cryptogram begins on the fortieth letter. Thirty-nine letters precede the cryptogram. These thirty-nine letters represent the thirty-nine books of the Old Testament. We may even discern a reference to *all thirty-nine books* in the difference between the gematric values of the cryptogram's two words. In 400 gematria yodh-qoph-resh-aleph (= 'he shall be called') adds up to 311, and nun-tzaddi-resh-yodh (= 'a Nazarene') adds up to 350. Thirty-nine is the difference between 350 and 311. Remember that on the road to Emmaus the Lord Jesus expounded 'in ALL the Scriptures the things concerning himself' (Luke 24. 27). Of course the difference between the two gematric values is not important. It is the *sum* of the two values that matters. 661 is the 400 gematric value of the Hebrew word aleph-samekh-tau-resh (= star). It is also the dodecagonal or six-pointed star number of eleven.



'Is that the star of David?' asks one of Whittaker's four friends from chapter 1.

No, it is not. To speak of 'the star of David' is to use an unBiblical expression. What we have here is really 'the star of Nazareth'. In Acts 22. 8 the ascended Christ describes himself as 'Jesus of Nazareth'. In Revelation 22. 16 he describes himself as 'the bright and morning star'. Both titles are embraced by the prophecy with which St Matthew confronts us: HE SHALL BE CALLED A NAZARENE.

[Let me say one thing before we move on. In Hebrew the word for 'Nazarene' is spelled nun-TZADDI-resch-yodh, and the word for 'Nazarite' is spelled nun-ZAYIN-yodh-resch. Any translator of Matthew 2. 23 who imports the notion of *Nazarite* is ignoring the facts of orthography. Say out loud the two nonsensical English phrases *naught's Ree* and *gnaws ear*. (Lough Ree is an Irish lake.) It is true that zayin and tzaddi may both be represented by the Greek letter zeta. It is also true that the Hebrew words nun-TZADDI-resch-yodh and nun-ZAYIN-yodh-resch are in sonic terms no less distinct than *naught's Ree* and *gnaws ear*.

'Listen,' says Rosie. 'I accept what you're saying about a prophecy on the contents page of the Hebrew Bible.' She looks down at her notebook. 'But is that prophecy really important?'

Yes, it is!

'Then there should be some clear reference to the prophecy in the Biblical text,' says Miss Stone. 'What I mean is, some verse in the Hebrew Bible should contain a clear pointer to its own contents page.' She pauses. 'For years I've wondered about a statement which David makes Psalm 40: *in the volume of the book it is written of me*. Can you turn the verse up in Hebrew?'

Certainly. (It's verse 7 in the AV, but verse 8 in the Hebrew Bible. The eleven words which Rosie has quoted represent four words of the Hebrew original.)

במגלת-ספר כתוב עלי (= in the volume of the book it is written of me)

1. beth-mem-gimel-lamedh-tau hyphen 2. samekh-pe-resch
3. kaph-tau-wau-beth 4. ayin-lamedh-yodh

'Thanks,' says Rosie. 'Now tell me something. What is David saying? Does he mean merely *in the book*? And if so, why does he bother to say *in THE VOLUME OF the book*? Aside from clay tablets, every book in David's time was a *volume*: that is, a scroll that could be rolled up.' Miss Stone pauses. 'A stupid journalist robotically says *right royal* when he means *royal*. But the Biblical writers aren't stupid journalists. Why does David use an apparently redundant word?'

The questions which Rosie has asked take us into a strange area of language. Why do some people use superfluous words? When I was at riding-school, I was bemused by two excellent instructors who regularly talked about 'the silver stirrup'. (They meant *the stirrup*.) In the days when I helped to coach a rugby team, I was bemused by men who talked obsessively about 'the game of rugby'. (They meant *rugby*.) And I'm often bemused by weirdoes who insist on talking about 'the good doctor'. (They mean *the doctor*.)

No Biblical writer was a user of superfluous words. The Hebrew phrase which we render 'the volume of the book' is spelled mem-gimel-lamedh-tau samekh-pe-resh (the preficial beth = 'in'). David's phrase does not belong to that lexicon of lax language in which stirrups are silver, rugby is a game, and doctors are good!

We find the expression mem-gimel-lamedh-tau samekh-pe-resh in Jeremiah 36. 2, in Jeremiah 36. 4, and in Ezekiel 2. 9.

מגלת ספר

In all three cases we are dealing with a rollable book, or scroll, which is 'voluminous' enough to contain a substantial body of text. But when David, who is not speaking of himself, says prophetically

In the volume of the book it is written of me,

he is really saying

Throughout the course of the Scriptures it is written UPON me,

or

I am the basic musical theme UPON which the Scriptures are founded,

or even

I am the basic musical theme around which the Scriptures are convolved.

And that's not the whole tale of the prophecy. Certain ancient translators can help us to understand the meaning of David's Hebrew.

Where the AV has 'in the volume of the book', Psalm 40. 7 in the Greek Septuagint uses the expression

εν κεφαλιδι βιβλιου

That expression may be translated either 'in a chapter of the book', or 'in the UPPER PART of the book', or 'at the HEAD of the book'.

Where the AV has 'in the volume of the book', Psalm 40. 7 in the Latin Vulgate uses the expression

in capite libri

That expression may be translated either 'in a chapter of the book', or 'at the HEAD of the book'.

Where the AV has 'in the volume of the book', Hebrews 10. 7 in the Syriac Peshitta (quoting Psalm 40. 8) uses the expression

ܘܬܘܒܐ ܕܟܬܘܒܐ

Here is what the Syriac expression from Psalm 40. 8 looks like when it is written in Hebrew letters. (Syriac is a dialect of Aramaic.)

דבר׳ש כתובא

That expression may be translated 'in the chief of the books', or 'in the sum of the books', or 'at the HEAD of the books', or 'at the BEGINNING of the books'.

Now the phrase ‘in a chapter of the book’ tells us NOTHING. It is as if a modern writer was to say ‘on a page of the book’. Every word of the Bible belongs to some particular chapter. If you won’t specify the chapter, you may as well say ‘in the book’. By contrast, the phrase ‘in the UPPER PART of the book’ is more specific. The phrase ‘at the HEAD of the book’ is even more specific. That last phrase may be taken to mean, ‘on the contents page of the Hebrew Bible’.

For its part the phrase ‘in the chief of the books’ merely generates a question: what is the ‘chief’ of the Biblical books? You can forget about that one at once, because the Bible doesn’t have a ‘chief book’. And although the phrase ‘in the sum of the books’ does *sound* alluring, it should be construed in terms of neither letter-counting nor gematria. If it means anything, it must mean ‘all the way through the Bible’.

I reckon that we do well to render the Peshitta’s words either ‘at the HEAD of the BOOKS’, or ‘at the BEGINNING of the BOOKS’. Each of these English phrases may be taken to mean, ‘on the contents page of the Hebrew Bible’.

Rosie accepts that there *is* a prophecy on the contents page of the Hebrew Bible. At the same time she believes that there should be some clear reference to the prophecy in the Biblical text. In other words, she believes that the Biblical text should contain some clear pointer to the contents page. And so it does. We find the pointer in Psalm 40. 8-9 (= verses 7-8 in the English Bible). Let me interpret David’s Hebrew in the light of Matthew 2. 23.

Then said I, Lo, I come: on the contents page of the Hebrew Bible it is written of me, I delight to do thy will, O my God.....

WARNING: WHAT FOLLOWS HAS NOTHING TO DO WITH HUMAN CONTRIVANCE.

Look at the two Hebrew words which are rendered *to do thy will*.

lamedh-ayin-sin-wau-tau hyphen resh-tzaddi-wau-nun-kaph

לעשות-רצונך

Read the two words backward from left to right.

First you have a final kaph (that’s a special form of the letter kaph which is used at the end of a word). Then you come to a NUN. (Then you come to a wau, which acts as a long O-vowel.) Then you come to a TZADDI. Then you come to a RESH. Keep reading from left to right, ignore the hyphen, and you come to a TAU. Forget for a moment about the wau which acts as a long O-vowel. The four consecutive consonants NUN, TZADDI, RESH and TAU spell ‘Nazareth’ in Hebrew, and they are found in a prophetic passage which has to do with the Advent.

נצרת

If you think about it, you'll realize that David's words LO, I COME generate a question of their own. *Where to?* The answer is: to Nazareth. Here is a piece of Scripture whose full meaning cannot have been realized by its human author. You remember what the Pharisees said to Nicodemus in John 7. 52.

Search, and look: for out of Galilee ariseth no prophet.

I reckon that the Pharisees hadn't bothered to search and look in Psalm 40. It's funny. Ordinary people are often right when theological experts are wrong. Thus the multitude in Matthew 21. 11 can say,

This is Jesus the prophet of Nazareth of Galilee.

In Hebrew the name of Jesus is spelled yodh-shin-wau-ayin.

י ש ו ע

When we do what the Pharisees *ought* to have done, and look carefully at the Hebrew text of Psalm 40, we find the four-letter name of Jesus encoded inside a group of five consecutive letters. (The letter װ does duty for both sin and shin.) These five letters appear in the two words which are rendered OF ME / TO DO.

עלי לעשות

Now look at the three Hebrew words which are rendered OF ME / TO DO THY WILL. These three words contain the letters of both 'Jesus' and 'Nazareth'.

עלי לעשות-רצונך

There's more. The name of 'Christ' is encoded twice in Psalm 40. 'Christos' in Greek (spelled chi-rho-iota-sigma-tau-omicron-sigma) means 'the Anointed One', or 'the Messiah'. Without its nominative case-ending -OS, and without its I-vowel, the Greek name of Christ may be spelled in Hebrew either kaph-resh-samekh-tau, or kaph-resh-sin-tau. Look at the three Hebrew words which are rendered 'in the volume of the book it is written':

במגלת-ספר כתוב

Reading backward, we find the four consonants kaph, resh, samekh, and tau.

K R | S T

The name appears to be divided. Its first two consonants are separated from its last two consonants by the letter pe.

That pe does double duty in a two-word prophetic sentence which we must read from right to left in the normal manner. (The third letter of the first word, viz the third letter from the right (ף), is a special 'final' form of the letter pe (פ) that is used at the end of a word.)

תסף פרכת (= you will do away with the veil of the temple).

As you read that sentence, three verses come together in your mind.

Malachi 3. 1: Behold, I will send my messenger, and he shall prepare the way before me: and the Lord, whom ye seek, shall suddenly come to his temple, even the messenger of the covenant, whom ye delight in: **behold** (Greek Septuagint ἰδοῦ), he shall come, saith the LORD of hosts.

Psalms 40. 7: Then said I, **Lo** (Greek Septuagint ἰδοῦ), I come: in the volume of the book it is written of me.....

Matthew 27. 51: And, **behold** (Greek ἰδοῦ), the veil of the temple was rent in twain from the top to the bottom.....

Matthew's word ἰδοῦ (= behold) really means, 'See how the prophecies of Malachi and David are being fulfilled.' When is the temple veil rent in twain? At the very moment when the Lord himself *suddenly* comes to his temple.

If the Pharisees had found Nazareth in verse 9 of Psalm 40, the Hebrew word *sepher* (= book) might have made them think of Tzippori (*Sephoris* in Greek: Σεφορις). Sephoris was the administrative centre of Galilee, and it was only an hour's walk away from Nazareth.

Let's move on. The Greek word 'Christos' is encoded as KRISTOS, with both of its vowels represented, in the three Hebrew words which are rendered OF ME / TO DO THY WILL. These three words contain thirteen letters. Number the letters mentally from one to thirteen, starting on the LEFT with the special final form of kaph.

1 kaph 2 nun 3 wau 4 tzaddi 5 resh hyphen 6 tau 7 wau 8 sin 9 ayin 10 lamedh 11 yodh 12 lamedh 13 ayin

עלי לעשות-רצונך

Letters one, five, eleven, eight, six, three, and eight (again) spell KRISTOS.

kaph-resh-yodh-sin-tau-wau-sin = K-R-I-S-T-O-S

(The Hebrew letter kaph may be pronounced KH or CH, like the Greek letter chi, while the Hebrew letters yodh and wau can stand respectively for I and O.)

Now look at the first eleven of the thirteen letters.

יעשות רצונך

Letters eleven, eight, seven, and nine spell the Hebrew name of JESUS. Letters one, five, eleven, eight, six, three, and eight spell the Greek word CHRISTOS. Letters two, four, five, and six spell the Hebrew name of NAZARETH. Let me set out the three proper nouns which are encoded in eleven consecutive letters of Psalm 40. I'll begin the second noun with a normal kaph, and not with a final kaph.

נצרת

NAZARETH

כר יש תוש

CHRIST

ישוע

JESUS

The only letter which is not used, letter ten, is lamedh.

י לעשות רצונך

In 400 gematria lamedh has a value of thirty. That numerical value reminds us that at the time of his baptism 'Jesus himself began to be about thirty years of age' (Luke 3. 23). And here is something else. In 400 gematria the Hebrew name of the Lord's ancestor *Judah* (yodh-he-wau-daleth-he) adds up to thirty.

$$10 + 5 + 6 + 4 + 5 = 30$$

Most of the Pharisees were men of intelligence. If they had troubled to study eight consecutive words from Psalm 40, they would have found everything there: Jesus Christ, the Judahite prophet from Nazareth in Galilee, who began his ministry at the age of thirty.

'The *prophet?*' you say.

Oh, yes. Read the Messiah's message from the beginning.

Then said I, Lo, I come: in the volume of the book it is written of me, I delight to do thy will, O my God.....

The phrase 'Lo, I come' represents two words which are connected by a hyphen.

הנה-באתי

When you take the penultimate letter of the first word, and all the letters of the second word apart from its penultimate letter.....

הנה-באתי

.....you are left with the letters nun, beth, yodh, and aleph, which spell the Hebrew word for 'prophet'.

נביא

There is a piece of reflective pairing here.

הנה-באתי

One group of two significant letters separated by a non-significant letter is read forward, and the other group of two significant letters separated by a non-significant letter is read backward. A group of six consecutive letters contains the four-letter Hebrew word for 'prophet'. Inside that group of six letters there are two non-significant letters, *he* and *tau*. These two letters add up in 22 gematria to 27, which is the 22 gematric value of nun-beth-yodh-aleph (= prophet: 14 + 2 + 10 + 1 = 27). Another *he*, the rightmost letter of the phrase, is found outside the six-letter group. Since the Hebrew definite article is spelled *he*, that rightmost letter may be understood as a word in its own right. (*This is Jesus THE prophet of Nazareth of Galilee.*)

Before we leave Psalm 40, we'll look at two pieces of gematria. First, the two consecutive Hebrew words which are rendered I COME / IN THE VOLUME add up in 400 gematria to 888.

באתי במגלת

beth-aleph-tau-yodh beth-mem-gimel-lamedh-tau

$$[2 + 1 + 400 + 10] + [2 + 40 + 3 + 30 + 400] = 888$$

In 800 Greek gematria the name of Jesus adds up to 888.

Ιησους

iota-eta-sigma-omicron-epsilon-sigma

$$10 + 8 + 200 + 70 + 400 + 200 = 888$$

Secondly, the two Hebrew words rendered 'in the volume of the book' add up to 815 in 400 gematria.

במגלת ספר

beth-mem-gimel-lamedh-tau samekh-pe-resh

$$[2 + 40 + 3 + 30 + 400] + [60 + 80 + 200] = 815$$

So do the three Hebrew words which denote 'The Lord Jesus Christ'.

ה א ד ו ן י ש ו ע ה מ ש י ה

he-aleph-daleth-waw-nun yodh-shin-waw-ayin he-mem-shin-yodh-cheth

$$[5 + 1 + 4 + 6 + 50] + [10 + 300 + 6 + 70] + [5 + 40 + 300 + 10 + 8] = 815$$

'Tell me something,' says Rosie. 'Why did the Pharisees not bother to study Psalm 40?'

I don't know. Maybe they were fooling about with 'torah codes'. [Before I explain what 'torah codes' are, allow me to welcome five voluble members of the Equidistant Letter Sequence Incredible Encodement Society, 'Elsies' for short. One Elsie is telling his friends how his new wife recently passed her Test of English Language Proficiency. A second Elsie, who comes from the Texan city of Fredericksburg, is talking about charm quarks. A third Elsie is describing the Calabrian village of Drosi, in which he has spent his summer holiday. A fourth Elsie is reading Larry Niven's novel *The Long Arm of Gil Hamilton*. And a fifth Elsie, who has recently returned from Torgat Pass, is writing the clues for a treasure-hunt. (Whittaker hasn't met the fifth Elsie before, but the others turn out to be his Shakespeare-loving friends from the local art college.)

Time to start! The Hebrew word for 'law', *torah*, is spelled tau-waw-resh-he.

ת ו ר ה

Some people get very excited about the presence of what they call 'torah codes' in the Pentateuch. Let me show any prospective Elsie what these people mean.

Go to Genesis 1. Start on the first TAU which verse 1 contains. Skip forty-nine letters and you come to a WAU. Skip forty-nine letters and you come to a RESH. Skip forty-nine letters and you come to a HE.

Below you see the Hebrew text of Genesis 1. 1-5, which you should read with a magnifying glass. The four equidistant letters tau, wau, resh and he are printed in large bold type. Each of the five verses occupies its own separate line.

בראשית ברא אלהים את השמים ואת הארץ
והארץ היתה תהו ובהו וחשך על פני תהום ורוח אלהים מרחפת על פני המים
ויאמר אלהים יהי אור ויהי אור
וירא אלהים את האור כי טוב ויבדל אלהים בין האור ובין החשך
ויקרא אלהים לאור יום ולחשך קרא לילה ויהי ערב ויהי בקר יום אחד

Ecce miraculum! You have found the word tau-wau-resh-he in a group of one hundred and fifty-one letters. Marvel greatly. Consider yourself an Elsie.

Now see if you can find a *torah* with 49-letter gaps in Exodus 1. Start on the first TAU which verse 1 contains. Skip forty-nine letters and you come to a WAU. Skip forty-nine letters and you come to a RESH. Skip forty-nine letters and you come to a HE.

Below you see the Hebrew text of Exodus 1. 1-6. The four equidistant letters tau, wau, resh and he are printed in large bold type. Each of the six verses occupies its own separate line.

ואלה שמות בני ישראל הבאים מצרימה את יעקב איש וביתו באו
ראובן שמעון לוי ויהודה
יששכר זבולן ובנימן
דן ונפתלי גד ואשר
ויהי כל נפש יצאי ירך יעקב שבעים נפש ויוסף היה במצרים
וימת יוסף וכל אחיו וכל הדור ההוא

For a second time, you have found the word tau-wau-resh-he in a group of one hundred and fifty-one letters. Marvel greatly. Consider yourself a double Elsie.

Now see if you can find a *torah* spelled out with 49-letter gaps in Leviticus 1.

Alas. THERE ISN'T ONE TO BE FOUND.

Oh, well. You console yourself by finding *something else*. The Hebrew word which we render 'the LORD' is spelled yodh-he-wau-he. Start on the first YODH which verse 1 contains. Skip seven letters and you come to a HE. Skip seven letters and you come to a WAU. Skip seven letters and you come to a HE.

Below you see the Hebrew text of Leviticus 1. 1. The four equidistant letters yodh, he, wau and he are printed in large bold type.

ויקרא אל משה וידבר יהוה אליו מאהל מועד לאמר

Have you found the word yodh-he-wau-he in a group of twenty-five letters? Well, you can marvel greatly if you want. I reckon that you've behaved badly. You went looking for a torah-gram with 49-letter spacing. When you couldn't find one, you suddenly made two decisions.

1. *A completely different word will do very well.*
2. *There isn't much difference between a 49-letter spacing and a 7-letter spacing.*

Then you pressed the name of the LORD into service as a torah-substitute. Imagine a lunatic who proudly declaims the following paragraph.

'I went out to buy a ten-foot plank, and came home with a six-inch nail. That's pretty good. Planks and nails are closely related to each other. People often hammer nails into planks. And although I wanted a *plank* with particular dimensions of its own, the *nail* that I got has particular dimensions of its own.'

Are you any better than the lunatic whom we have imagined? You combine irreverence with pietism when you use the LORD's name to help you fiddle your result. What you've found in Leviticus 1 has NOTHING to do with the Hebrew word for 'law', and NOTHING to do with 49-letter spacing. Admit frankly the fact that you went looking for a torah-gram in the first chapter of Leviticus, *and failed to find one*. Look, I'll help you. Let me describe your 'result' in three words.

IT WAS NEGATIVE.

Now see if you can find a *torah* spelled out with 49-letter gaps in Numbers 1.

Alas. THERE ISN'T ONE TO BE FOUND.

Hold on. What happens if you spell the word *backward* (he-resh-wau-tau)?

Start on the first HE which verse 1 contains. Skip forty-nine letters and you come to a MEM. No good.

Try again. Start on the *second* HE which verse 1 contains. Skip forty-nine letters and you come to an ALEPH. No good.

Try again. Start on the *third* HE which verse 1 contains. Skip forty-nine letters and you come to a RESH. Skip forty-nine letters and you come to a WAU. Skip forty-nine letters and you come to a TAU.

Below you see the Hebrew text of Numbers 1. 1-3. The four equidistant letters he, resh, wau and tau are printed in large bold type. Verse 1 occupies the first two lines, verse 2 occupies the middle two lines, and verse 3 occupies the last two lines.

וידבר יהוה אל משה במדבר סיני באהל מועד באחד לחדש השני
 בשנה השנית לצאתם מארץ מצרים לאמר
 שאו את ראש כל עדת בני ישראל למשפחתם לבית אבתם במספר
 שמות כל זכר לגלגלתם
 מבן עשרים שנה ומעלה כל יצא צבא בישראל תפקדו אתם
 לצבאתם אתה ואהרן

You have found the word tau-wau-resh-he spelled backward in a group of one hundred and fifty-one letters. Marvel greatly. Consider yourself a triple Elsie.

Now see if you can find a *torah* spelled out with 49-letter gaps in Deuteronomy 1.

Alas. THERE ISN'T ONE TO BE FOUND. Why do I keep thinking about a featureless nautical chart from 'The Hunting of the Snark'?

If you analyze the Biblical text carefully, you will find figurate gematric numbers, gematrically equivalent words, equidistant letter sequences, and pieces of subtextual patternation. Some of these phenomena bespeak a *deliberate authorial purpose*. Genesis 15. 11 begins (= וירד העיט על הפגרים (= And when the fowls came down upon the carcasses). I reckon that at least one of the fowls was a bat (עטלף), because the sun goes down in verse 12. You know already that ף is the 'final' or end-of-a-word form of the letter פ. Start counting on the sixth letter from the right, and leave one-letter gaps.

וירד העיט על הפגרים [ayin-teth-lamedh-pe = 'bat']

I'm wielding a negative sword in chapter 10 not because letter-counting is absurd, but because letter-counters of the 'Bible-code' school tend to behave in an absurd manner. (Imagine that you're composing a Hebrew text. If you reverently encode some piece of truth about creation or redemption, your purpose is serious. If you pietistically encode some darling word of the theologians, your purpose is frivolous.) Why do 'Bible-code' analysts ignore the Biblical text? Because their only purpose is *self-arousal*. Having set their letter-spacing knob to WHATEVER IT TAKES, the Elsie's titillate themselves by finding WHATEVER THEY WANT. Folly can be wonderfully facile. I mean to say, consider the line of Hebrew which appears below. If you start reading at the right on the first letter, and leave twelve-letter gaps, you will spell out the name of BARAK (beth-resh-qoph). Are you looking at a Biblical cryptogram about the hero of Judges 4? No. You are looking at Aharon Amir's translation of 'Jabberwocky'.

בעת בשק ושלי פחזר באפסי חק סבסו מקדו

Oh, well. You console yourself by finding *something else*. Start on the fourth HE which verse 5 contains. (That's right, there's nothing doing until you get to verse 5!) Skip forty-eight letters and you come to a RESH. Skip forty-eight letters and you come to a WAU. Skip forty-eight letters, and when you reach the second word of verse 8 you come to a TAU.

Below you see the Hebrew text of Deuteronomy 1. 1-8. The four equidistant letters he, resh, wau and tau are printed in large bold type. [Verse 1 occupies the first two lines, verse 2 occupies the third line, verse 3 occupies the fourth and fifth lines, while verse four occupies the sixth and seventh lines.] Verse 5 occupies the eighth line, verse 6 occupies the ninth line, verse 7 occupies the tenth and eleventh lines, while verse 8 occupies the last two lines.

אלה הדברים אשר דבר משה אל כל ישראל בעבר הירדן במדבר
 בערבה מול סוף בין פארן ובין תפל ולבן וחצרת ודי זהב
 אחד עשר יום מחרב דרך הר שעיר עד קדש ברנע
 ויהי בארבעים שנה בעשתי עשר חדש באחד לחדש דבר משה אל
 בני ישראל ככל אשר צוה יהוה אתו אלהם
 אחרי הכתו את סיחן מלך האמרי אשר יושב בחשבון ואת עוג מלך
 הבשן אשר יושב בעשתרת באדרעי
 בעבר הירדן בארץ מואב הואיל משה באר את התורה הזאת לאמר
 יהוה אלהינו דבר אלינו בחרב לאמר רב לכם שבת בהר הזה
 פנו וסעו לכם ובאו הר האמרי ואל כל שכניו בערבה בהר ובשפלה
 ובנגב ובחוף הים ארץ הכנעני והלבנון עד הנהר הגדל נהר פרת
 ראה נתתי לפניכם את הארץ באו ורשו את הארץ אשר נשבע יהוה
 לאבותיכם לאברהם ליצחק וליעקב לתת להם ולזרעם אחריהם

You have found the word tau-wau-resh-he spelled backward in a group of one hundred and forty-eight letters. Marvel greatly. Consider yourself a quadruple Elsie.

Overall, leaving aside the book of Leviticus, you have managed to discover a quartet of torah-grams inside a collection of six hundred and one letters. Really well done. What are you?

Start reading at the left on the first letter, and leave zero-letter gaps.

A L O S E R .

(Hark, the doorbell! Jane Dascey has come over to borrow a mandoline.)

Now let us tabulate a few facts about the 'torah codes' in the Pentateuch.

| | | |
|--------------------|------------------|------------------|
| Genesis 1. 1ff | 49-letter gaps | Read it forward |
| Exodus 1.1ff | 49-letter gaps | Read it forward |
| Leviticus 1 | NOT THERE AT ALL | |
| Numbers 1. 1ff | 49-letter gaps | Read it backward |
| Deuteronomy 1. 5ff | 48-letter gaps | Read it backward |

Does the 'torah code' business work with 49-letter spacing if you start on TAU?

| | |
|-------------|--|
| GENESIS | Yes, it works if you read it forward. |
| EXODUS | Yes, it works if you read it forward. |
| LEVITICUS | No, it doesn't work at all, whether you read forward or backward. |
| NUMBERS | No, it doesn't work. (Or: yes, it works if you skip two HEs and read backward.) |
| DEUTERONOMY | No, it doesn't work at all. (Or: yes, it works if you jump down to verse 5, skip three HEs, <i>change the letter-spacing</i> , and read backward.) |

If you were going to take the 'torah codes' seriously, here is what you would need to discover.

Start on the first TAU of Genesis 1: leave 49-letter gaps: tau-wau-resh-he.

Start on the first TAU of Exodus 1 : leave 49-letter gaps: tau-wau-resh-he.

Start on the first TAU of Leviticus 1: leave 49-letter gaps: tau-wau-resh-he.

Start on the first TAU of Numbers 1: leave 49-letter gaps: tau-wau-resh-he.

Start on the first TAU of Deuteronomy 1: leave 49-letter gaps: tau-wau-resh-he.

Here is what you get.

Start on the first TAU of Genesis 1: leave 49-letter gaps: tau-wau-resh-he.

Start on the first TAU of Exodus 1: leave 49-letter gaps: tau-wau-resh-he.

Don't start anywhere in Leviticus 1, and don't count letter-gaps, because there's no *torah* here.

Start on the third HE of Numbers 1: leave 49-letter gaps: he-resh-wau-tau.

Start on the twentieth HE of Deuteronomy 1: leave 48-letter gaps: he-resh-wau-tau.

I know it's hard to take in, but the Elsie symmetricians have managed to hammer these disobliging facts into a five-branched candlestick *whose central branch doesn't exist*. (I don't believe it. The third Elsie is muttering that the number which is written FEEFEET in base 36 is written 33522494645 in base 10.)

D E F I N
 I T E L Y
 T H E R E
 D E F I N
 I T E L Y
 T H E R E
 N O T T H
 E R E A
 T A L
 L S
 O R
 T O
 F T H
 E R E S O
 R T O F T H E R E

The candlestick's disparate members form a truly marvellous pattern.

YES YES NO SORT-OF SORT-OF

And that pattern bears a message which many readers will find laughable.

For whether the Elsies like it or not, the absence of a torah-gram in Leviticus appears to hint at the ultimate centrality of UNBEING.

1. DEFINITELY THERE
2. DEFINITELY THERE
3. NOT THERE AT ALL
4. SORT-OF THERE
5. EVENTUALLY SORT-OF THERE IN A DIFFERENT MANNER

Let us ask a very simple question. Why go for a 49-letter spacing?

'Well, seven is terribly important in the Bible,' says the third Elsie, 'so seven times seven has to be even more important. And as it happens, forty-nine represents a most important word. In 22 gematria, forty-nine is the value of the Hebrew word for SINAI.' He pauses. 'That word is spelled samekh-yodh-nun-yodh. Fifteen, plus ten, plus fourteen, plus ten, gives you forty-nine.'

Very good. Please answer two further questions.

What has the proper noun SINAI got to do with the opening verses of Genesis, and why have you arbitrarily adduced the gematric value of a particular Hebrew word?

SINAI won't help you here, and neither will gematria.

Look at the six proper nouns which follow. Each one of them has a 400 gematric value of forty-nine.

AHOLIAB (aleph-he-lamedh-yodh-aleph-beth = $1 + 5 + 30 + 10 + 1 + 2$)

ELIDAD (aleph-lamedh-yodh-daleth-daleth = $1 + 30 + 10 + 4 + 4$)

HIEL (cheth-yodh-aleph-lamedh = $8 + 10 + 1 + 30$)

OBIL (aleph-wau-beth-yodh-lamedh = $1 + 6 + 2 + 10 + 30$)

DELIAH (daleth-lamedh-yodh-he = $4 + 30 + 10 + 5$)

MOAB (mem-wau-aleph-beth = $40 + 6 + 1 + 2$)

Notice that the name of MOAB is mentioned in Deuteronomy 1. 5, the very verse in which your putative torah-gram begins. Why then does the Deuteronomic torah-gram employ a spacing of forty-EIGHT and not forty-nine letters?

Sorry, I get it now! SINAI in Chinese is 西奈. Six strokes in the first character, eight strokes in the second character. And six times eight is forty-eight. Right?

'I wish you wouldn't be frivolous,' says the third Elsie severely.

'Then let me be serious,' says Delia Benn. 'Why can you people not find a torah-gram in Deuteronomy until you get to verse 5?'

'Ah,' replies the third Elsie. 'That's easy. As the Vilna Gaon explains, the book of Deuteronomy doesn't really *begin* until you reach verse 5.'

Oh, dear. Are the first four verses of Deuteronomy characterized by *unbeing*, like the Levitical torah-gram? (Delia whispers, *He's the Belfast Goon. Careful!*)

Let us forbid acts of wilful blindness as we return to the matter of FORTY-NINE.

The Elsies have no exquisite reason to choose a 49-letter spacing. They can't associate forty-nine convincingly with gematria. And they needn't try to associate it with the 'forty and nine years' of Leviticus 25. 8. They may as well try to link it with the forty-niner whom we meet in 'Oh, my darling Clementine'.

On its own forty-nine means NOTHING, and as a spacer it achieves very little.

Consider the results. If you start on the first TAU of each Pentateuchal book, and employ an arbitrary spacing of forty-nine letters, you'll manage to get a torah-gram twice out of five times.

Two out of five with an arbitrary letter-spacing isn't very impressive.

Now let me state a number of unamusing facts.

1. I have tried in chapter 10 to give a perfectly lucid and honest explication of the 'torah-codes' because I believe that such an explication has never been given before.
2. The 'torah-codes' are often presented so as to make people believe that their letter-spacing is the same all the way through, and that each of the four torah-grams begins on the first tau or he of its own particular book.
3. The choice of a four-letter word is completely arbitrary.
4. The choice of the word TORAH is completely arbitrary.

'I must protest,' cries the third Elsie. 'Rashi declared that God created the world for the sake of the Torah.'

'Then he was stupid,' says Jane Dasey. 'You know what the twenty-four elders sing in Revelation 4. 11. *Thou art worthy, O Lord, to receive glory and honour and power: for thou hast created all things, and FOR THY PLEASURE they are and were created.*'

Stand back and think for a moment. Why should we be required to look for a word which begins with the *last* letter of the Hebrew alphabet? Aleph is the *first* letter of the Hebrew alphabet. What happens if we start on an aleph, and spell out a four-letter word by leaving 49-letter gaps?

Look once again at Genesis 1. 1-5. Start on the first ALEPH which verse 1 contains. Skip forty-nine letters and you come to a YODH. Skip forty-nine letters and you come to a RESH. Skip forty-nine letters and you come to an ALEPH.

בראשית ברא אלהים את השמים ואת הארץ
והארץ היתה תהו ובהו וחשך על פני תהום ורוח אלהים מרחפת על פני המים
ויאמר אלהים יהי אור ויהי אור
וירא אלהים את האור כי טוב ויבדל אלהים בין האור ובין החשך
ויקרא אלהים לאור יום ולחשך קרא לילה ויהי ערב ויהי בקר יום אחד

You have found the Hebrew word aleph-yodh-resh-aleph, which means 'I shall be afraid', in a group of one hundred and fifty-one letters. Marvel greatly.

The fear of the LORD is the beginning of wisdom.

Is the four-letter word which begins on the first aleph less 'significant' than the four-letter word which begins on the first tau? Ignore any Enlightened Adept who tells you that it is.

Every single element of the so-called 'torah codes' is arbitrary.

The choice of a four-letter word.

The choice of the word 'torah'.

The letter on which you start counting.

The number of letters in the spacing.

The direction in which you read.

Furthermore, aside from requiring each encoded word to contain four letters, you can arbitrarily change every single element of the 'torah codes'.

If you can't find a 'torah' in the opening verses of Leviticus, you can go for a completely different word.

If you can't get the first appearance of your starting-letter to work, you can go for a later appearance (in the case of Deuteronomy, the TWENTIETH appearance!).

If you can't get a 49-letter spacing to work, you can go for a 48-letter spacing.

If you can't get a 'torah' by reading forward, you can read backward.

Sensible people go to the Bible and read what it says. They don't read the Bible through the lens of their own verbal obsessions. They don't expect the Bible to confirm some fixed idea of their own. And they don't manipulate the Biblical text for some fatuous purpose of their own.

Now be warned. If you've been offended by my treatment of the Elsie in chapter 10, you'll be even more offended when you come to chapter 11.

'Forget about equidistant letter spacing,' says a self-important scholar called Ignatius Cobe. 'I wish you would come to your senses, and stop writing monkish drivel. You have treated two verses of Psalm 40 in an absurdly fanciful manner.'

Fanciful? Not guilty! In writing about verses 8 and 9 of Psalm 40, I have entered a world that has nothing to do with human contrivance. Some time ago a wise Australian friend said to me that the Bible was 100% human, and 100% divine. Let us not pretend to know everything. The conceit of a know-all may be rock-hard, but God's Word is *like a hammer that breaketh the rock* (Jeremiah 23. 29).

[Ignatius Cobe accuses me of writing 'monkish drivel'! I'm sorry for laughing. The monkish Cobe does all his thinking in the cloister, and there is the difference between us. I mean to say, Cobe isn't exactly the sort of boy that you meet when you go to sparring practice. His sister is a neighbour of mine. Last year she asked me to take down a lath-and-plaster wall in her large summer-house. When I entered the building, I found Ignatius footering about at the wall with a twelve-ounce mallet and a quarter-inch chisel. I asked him to leave. Then I destroyed the wall with a sledgehammer. The whole operation took three minutes. Tee, hee! Ill-mannered Ignatius is a delicate creature. If you have a robust reverence for the Biblical text, he disapproves of you. My experience of Cobe is that he comes out from under the skirting-board only in order to condemn.]

Leaving aside the matter of divine inspiration, I think back to the years of my life during which I studied runic writing. Were the old runemasters wrong to believe that there was more to their careful and intelligent scribing than the symbolical representation of what they themselves meant to say? No creative writer knows exactly what he does when he commits an act of literature. Part of his writing may conform in some way to the shape of past, present, or future realities. At certain times a creative writer can participate in what John Buchan calls 'the reasoned government of the universe'.

CHAPTER 11: SHEWING OF HARD SENTENCES

He hara wa te manu? What is the bird?
He pitori te manu. It is a robin.

Maori song

Quack philology is the first resort of the charlatan. One minute ago I happened to say that Galatians was the fourth epistle in the New Testament. A moment later Delia thought fit to announce that the Oscan word for 'four' was *petora*, and at once the third Elsie had a vision. 'Pe-TORA,' he cried excitedly. '*Torah* in Greek is spelled τωρα, or *tora*.' Bah! Here is a game that any loser can play. The *fourth* letter of תורה, the Hebrew word for 'law', is *he*. Now attend.

ה (*he*) is the Hebrew alphabet's *fifth* letter. The Lao word for 'five' is ຫ້າ (*ha*). It cannot be without significance that LAO-medon, king of Troy, had FIVE sons, and several daughters including HE-sione, whose Greek name Ησιονη has an 800 gematric value of 346, like the word Γαλαται (= Galatians). You can see that the digital sum of 346, which is thirteen, is also the 400 or 22 gematric value of the Hebrew word for 'one' (אחד: aleph-cheth-daleth). For its part the Quechan word for 'one', *arsentik*, must be related to the Moldovan musician ARSENIE TODIRAȘ, who has performed along with NATALIA GORDIENKO (Наталія Гордієнко in Ukrainian), and the G of that lady's surname, being the *seventh* letter of our English alphabet, reveals that the letters NATALIA ORDIENKO must be rearranged to give the *seven-syllable* English phrase LIKE A AND O IN TORA. Toora-loora-lay! People are beginning to scream, so I'll stop.

Some enlightened adepts are obsessed with the Hebrew word for 'law'. They should not presume that Almighty God shares their obsession. I get exasperated when preachers say over and over again, 'The Jewish law, the *torah*.....'. It would do me as much good if they said, 'The Icelandic fox, the *tóa*.....'. Let me speculate reverently. I wonder if we can hear a hint of divine exasperation when the Lord Jesus speaks to the Pharisees about 'YOUR law' (John 8. 17):

It is also written in YOUR law, that the testimony of two men is true.

The Lord is alluding both to Deuteronomy 17. 6 and to Deuteronomy 19. 15. On another occasion he talks about 'YOUR law' to the Jews who are about to stone him (John 10. 34):

Is it not written in YOUR law, I said, Ye are gods?

Notice that here the Lord Jesus quotes part of Psalm 82 as part of the overall 'law'. By doing so, he shows that the Psalter is in no way inferior to the Pentateuch. And the New Testament writers proclaim the same fact, for the Old Testament book from which they quote most frequently is the Psalter.

Psalm 35. 19 is quoted by the Lord Jesus in John 15. 25.

But this cometh to pass, that the word might be fulfilled that is written in THEIR law, They hated me without a cause.

The Lord Jesus Christ shows his true relation to the law in Matthew 5. 17-18.

Think not that I am come to destroy the law, or the prophets: I am not come to destroy, but to fulfil.

For verily I say unto you, Till heaven and earth pass, one JOT (ιωτα) or one TITTLE (κεραια) shall in no wise pass from the law, till all be fulfilled.

Our phrase 'one jot or one tittle' renders the Greek phrase ιωτα εν η μια κεραια.

ΙΩΤΑ ΕΝ Η ΜΙΑ ΚΕΡΑΙΑ

Ι-ΩΤ-α = JOT (*i-ot-a*), εν = ONE, η = OR, μια = ONE, κε-ρα-ια = TITTLE (*ke-ra-ia*)

The exact centres of the two Greek words *iota* and *kerasia* spell τωρα (= *tora*, the Greek spelling of 'torah'). Here we have an inspired statement that every cell of the law expresses the character of its divine author. God's law really is found 'in the details', and it is fulfilled by the one to whom it points. Each of the *to-ra* syllables runs towards the *iota* which is the initial of *Ιησους* (= Jesus). The Lord Jesus Christ is 'the Alpha and the Omega', so the vowel in the second syllable is ALPHA, while the vowel in the first syllable is OMEGA.

[Ignatius Cobe disagrees with me. Will he kindly account for the ABCBA word order? 'Never mind the word order,' Cobe splutters, as he prepares to sink into one of his tantric tantrums. 'A short time ago you derived the phrase LIKE A AND O IN TORA from the name of a modern singer. Now you produce the Greek word τωρα from ιωτα εν η μια κεραια. What is the difference?']

I'll tell you. Natalia Gordienko has nothing to do with the Jewish law, and she herself is not 'like' two particular vowels. In producing a ludicrous τωρα-gram from the name of Natalia Gordienko, by way of warning gullible people against folly, I was obliged both to suppress the G and to make room for the inexplicable word LIKE. By contrast, in Matthew 5. 17-18 the Lord Jesus is talking about the LAW, and about the LETTERS which compose its words. Now. Will some kind scholar please account for the ABCBA word order of ιωτα εν η μια κεραια?

Look at ιωτα εν η μια κεραια. The total 800 gematric value of the nine underlined letters aleph, epsilon, nu, eta, mu, iota, alpha, kappa, and epsilon is 140, which is the 22 gematric value of the three Hebrew words he-aleph-daleth-wau-nu yodh-shin-wau-ayin he-mem-shin-yodh-cheth (= the Lord Jesus Christ).

- α ε ν η μ ι α κ ε - = ה י ש מ ה ע ש ו י ן א ד ן ה

GREEK [1 + 5 + 50 + 8 + 40 + 10 + 1 + 20 + 5] = 140

HEBREW [5 + 1 + 4 + 6 + 14] + [10 + 21 + 6 + 16] + [5 + 13 + 21 + 10 + 8] = 140

We've seen how in 400 gematria those same three Hebrew words add up to 815.

ה י ש מ ה ע ש ו י ן א ד ן ה

[5 + 1 + 4 + 6 + 50] + [10 + 300 + 6 + 70] + [5 + 40 + 300 + 10 + 8] = 815

815 is also the 400 gematric value of Psalm 40's phrase beth-mem-gimel-lamedh-tau hyphen samekh-pe-resh (= in the volume of the book).

ב מ ג ל ת - ס פ ר

$$[2 + 40 + 3 + 30 + 400] + [60 + 80 + 200] = 815$$

Psalm 40 contains one of the clearest prophecies about the coming of the Messiah. As soon as the Pharisees realized that the Lord Jesus came from Nazareth in Galilee, they should have searched the Scriptures in their meticulous jot-and-tittle fashion. They might have found more than we have found.

Let's move on. We've already alluded to Isaiah 48. 6, which contains the word nun-tzaddi-resh-wau-tau (= 'hidden things').

נצרות

Forget for a moment about the penultimate letter wau, which acts as a long O-vowel.

Notice the four consonants NUN, TZADDI, RESH and TAU.

נצרות

The town of 'Nazareth', which is not mentioned by name in the Old Testament, is encrypted both in Psalm 40 and in Isaiah 48 *along with a long O-vowel*.

No one knows why a long O-vowel should appear in one of the Greek words for 'Nazarene' (*Nazoraios*: nun-alpha-zeta-OMEGA-rho-alpha-iota-omicron-sigma).

Let me print the word *Nazoraios* in Greek letters below, with the OMEGA (or long O-vowel) underlined.

Ναζωραϊος

You may be reminded of how someone who lives in the Scottish city of GLASGOW is called a GLASWEGIAN.

Taken together with the letter which precedes it, the long O-vowel in *Nazoraios* may have suggested to early Christians the Greek word for LIFE (zeta-omega-eta: ζωη).

ζω--η

Whatever the case, David and Isaiah have unconsciously associated the long O-vowel of *Nazoraios* with the name of Nazareth.

We've worked steadily for the last two hours. Let's break for a while!

The Elsie look as if they could use a little joy. Maybe we ought to show them some fortuitous pieces of equidistant letter spacing.

Delia and Rosie have gone off to make tea. They seem to be rather happy. *Für Elise* from the kitchen radio is having to compete with shrieks of laughter.

Now the third Elsie is coming out with a wonderful piece of nonsense about the Japanese word for 'death', the Japanese word for 'four', the Choctaw word for 'four' (*ushta*), the funereal figurines of ancient Egypt (ushabti), and the Croatian Ustashi. What a loser! If you believe him, then everything is everything else.

On the table there lies a theatrical review which bears the headline PULSING LIFE AND POTENT CHASTITY. I've seen it before. It is the only piece of journalism that has ever made Delia Benn weep for joy. As soon as I notice the headline, I find myself swimming in a stream of memories.

Last year. A freezing winter night. A theatre in London. A once-in-a-lifetime performance of *The Tempest*. And my next-door neighbour in the rôle of Miranda, completely stealing the show. I still have the souvenir matchbox.



By no contrivance, my embracketed memories turn out to encrypt nine different words! Read forward, and use an ELEVEN-LETTER SPACING throughout.

1. LONDON A ONCE IN A LIFETIME
PERFORMANCE OF THE TEMPEST
2. LAST YEAR A FREEZING WINTER NIGHT A THEATRE
3. IN A LIFETIME PERFORMANCE OF THE TEMPEST
4. THE RÔLE OF MIRANDA COMPLETELY STEALING THE
5. THE RÔLE OF MIRANDA COMPLETELY STEALING THE
6. PERFORMANCE OF THE TEMPEST AND DELIA
7. LONDON A ONCE IN A LIFETIME
PERFORMANCE OF THE TEMPEST
8. THE RÔLE OF MIRANDA COMPLETELY STEALING THE
9. IN A LIFETIME PERFORMANCE OF THE TEMPEST

| | | | | |
|------|------|------|-----|-----|
| NEAP | FET | MET | MEG | RAT |
| FEE | DIRE | TALE | LOT | |

The nine encrypted words form the skeleton of an apocryphal story about Afanasy Fet which is not yet known to historians of Russian literature. (At the time of the NEAP tide the poet Afanasy FET MET a girl called MEG, was bitten by a RAT, and went on to write, for a substantial FEE, a DIRE TALE about Abraham's nephew LOT.)

Thirty significant letters appear inside a group of one hundred and thirty-five consecutive letters. Thirty out of one hundred and thirty-five, and *a uniform eleven-letter spacing!* Compare that with sixteen significant letters out of six hundred and one letters in the case of the four torah-grams, *which don't have a uniform letter-spacing.*

Now why are all the Elsie's, as Miranda would say, 'with anger so distemper'd'?

They're saying that we have 'no exact criterion'. I don't know what they mean.

Never mind! Once we show the poor things some *serious* examples of equidistant letter spacing, they'll want to jump up and down in delight.

Excuse me for a moment. Archdeacon Blennerhassett Blane is on the phone. Aside from his ecclesial and musical duties, the archdeacon sits on the board of a local EEL fishery. Read forward, starting on the E of ARCHDEACON, leave nine-letter spaces, and marvel.

ARCHDEACON BLENNERHASSETT BLANE

Now that I'm back, we can look at the name of WOODROW WILSON.

Read backward from the S of WILSON, and leave four-letter spaces.

WOODROW WILSON

The word SOW miraculously emerges from the president's name.

There follows something even more wonderful.

Delia Benn is fond of John Wolcot's poem 'To a kiss'. Look at the last two words of line 4.

*Soft child of love, thou balmy bliss,
Inform me, O delicious kiss,
Why thou so suddenly art gone,
Lost in the moment thou ART WON?*

*Yet go! For wherefore should I sigh?
On Delia's lips, with raptured eye,
On Delia's blushing lips I see
A thousand full as sweet as thee.*

You recall the quotation from Woodrow Wilson which appeared as an epigraph in chapter 1.

MY FATHER'S FATHER WAS BORN IN THE NORTH OF IRELAND.....

Five of Wilson's words encrypt Wolcot's phrase ART WON. Start on the A of FATHER'S, and leave three-letter spaces.

FATHER'S FATHER WAS BORN IN

After reading John Wolcot's poem, you may like to examine a piece of Latin verse in which another Delia is celebrated. (The didactic song-text which follows naughtily wears its scansion upon its face, as C S Calverley would say.)

ceu cupid^Os aurae dedit artus i^Nstimulanti
compar A^Eolio clara modo Lala^Ge;
ceu suras celeri pr^Aedulces annuit unda^E
Cynthia vocali laet^A diu lituo;
non minus a^Tque foris cannas inf^Lavit agrestes
gemme^A rorato Delia mane ge^Nu;
sic mihi visa fere c^Antus deducere cult^S
Euterpe collo pura probe tereti.

(= As Lalage gave her eager limbs to the provoking wind, and accompanied the music of the Aeolian lyre with her clear voice; as Cynthia, lingering in delight at the roar of her trumpet, let the rushing waves play above her lovely ankles; and even as Delia blew on her rustic canes, wandering abroad with jewels of morning dew on her knees: almost thus seemed Euterpe to me, truly chaste, as she drew forth cultured songs from within her smooth and shapely neck.)

If you start on the O of *cupidos*, and leave seventeen-letter spaces, you'll be able to read the cryptical Latin message ONEGA EAT, LANAS! (= Lanas, let Onega go!). *Lanas* is the name of a French village, and *Onega* is the name of a Russian lake, so the message means FRANCE, LET RUSSIA GO!. In addition, the first three letters of the message anagrammatize the last three letters of NAPOLEON. How would Tolstoy have construed the message? *A French attempt to conquer Russia will mean the beginning of the END of Napoleon.* Tee, hee.

Here's an easier one. Baron Otfried Hans Freiherr von Meusebach (John O Meusebach) was the founder of Fredericksburg, where the Texan quark-charmer lives. The baron's family motto was TENAX PROPOSITI (= Whatever I start, I finish). You'll observe that TENAX is a felicitous anagram of TEXAN. Strange, sez you? Indeed it is. But you'll notice something even stranger if you begin to read Meusebach's motto on the first letter, and leave two-letter spaces.

TENAX PROPOSITI

The French vocable TAROT miraculously emerges from two Latin words.

Many readers of the Bible know that LINUS is mentioned along with CLAUDIA in II Timothy 4. 21. It may surprise them to learn that the name of LINUS is concealed in the sportive substance which is mentioned below. Start on the antepenultimate letter and read backward, leaving three-letter gaps.

SODIUM BENTONITE CLAY

Now look at a wonderful example of five-letter spacing from chapter 1.

YOU HAVE TO ACCEPT THAT NO READER KNOWS ANYTHING

Six words of this dictum encode the word *TORA* (= τωρα, the Greek spelling of TORAH). Start on the sixth letter, read forward, and leave five-letter gaps.

ACCEPT THAT NO READER KNOWS ANYTHING

For some reason our friends are unimpressed by the miracle. Let's move on!

The wife of one Elsie has recently passed her TELP (= Test of English Language Proficiency). She and her husband will appreciate the following example of *eight*-letter spacing from chapter 1. Read forward, starting on the fourth letter.

THAT WAS A PERFECTLY APPALLING EXAMPLE

Another Elsie was talking about CHARM. Here's a third miraculous sentence from chapter 1. Read backward from the last C, and leave seven-letter gaps.

**CAN YOU THINK OF A SINGLE ACADEMIC AUTHOR
WHO EVER ACHIEVED HIGH OFFICE**

The third Elsie has spent his summer holiday in the Calabrian village of DROSI.

Here on my desk is a photograph of Nikola Tesla (seated, lower left).



The badly worn photograph bears an inscription which begins as follows:

TO MY ILLUSTRIOUS FRIEND SIR WILLIAM.....

It should arouse fear in people of intelligence to observe how the third and fourth words miraculously encode the name of DROSI. Start on the D of FRIEND, and read backward with three-letter spacing.

ILLUSTRIOUS FRIEND

What-ho! The fifth Elsie has found the word FEAR in one of her own treasure-hunt clues. Start on the F of OF, and read forward with nine-letter spacing.

COUNT THE NUMBER OF LAMPS YOU SEE,
THEN WALK ALONG THE STREET WITH GLEE.

The fourth Elsie is reading a novel by Larry Niven whose title encodes the name TORGAT. Start on the title's first letter, and read forward with three-letter spacing.

THE LONG ARM OF GIL HAMILTON

Having recently returned from Torgat Pass, the fifth Elsie is able to discern in Niven's title a name which means nothing to most people.

In truth, the poor girl appears to be rather unglad. She's beginning to lose faith in the Doctrine of Equidistant Letters which her four friends expound. But she still believes that encryption based on letter-spacing is a useful tool.

In time to come I may set aside my own dislikes, follow her example, and discover a number of important things. For the moment, let us consider one line from the song 'Midnight in Paris' by Stephen Stills.

Je n'ai pas de remors te vouloir (= I feel no compunction about wanting you).

Look at the two consecutive French words REMORS TE.

You'll notice that Stills has chosen to write *remors* instead of the more common *remords*.

Now Vladimir Nabokov once said, 'I could have been a great French writer.'

Here are twenty-eight consecutive letters from Nabokov's finest novel, *Pnin*:

.....I rode home to our rosy-stone house.....

Ignore the first and last words, start on the R of RODE, and leave 2-letter gaps. You can see that inside a group of twenty-two consecutive letters, Nabokov has prophetically encoded two consecutive French words from a song-text by Stephen Stills.

.....I RODE HOME TO OUR ROSY-STONE HOUSE.....

Notice how eight significant letters appear inside a group of twenty-two consecutive letters. Compare that score with SIXTEEN significant letters out of SIX HUNDRED AND ONE letters in the case of the four torah-grams.

‘Here’s a dictum of Claudia Schiffer,’ says Delia, ‘which miraculously encodes the word WIND. Start reading on the fifth letter, and leave six-letter gaps.’

I KNOW ONE DAY I’LL BE CONSIDERED TOO OLD.

‘In the same sort of area,’ Miss Benn continues modestly, ‘here’s a secret message from *Alf*. It alludes to the garments that I wore in my catwalk days.’

Alf’s message contains *five names*.

(A clutch of proper nouns often signals the presence of a cryptogram.)

Inside a group of twenty-seven consecutive letters you’ll be able to find fourteen significant letters. Start reading on the fourth letter, and leave one-letter gaps. If you can’t find Alf’s signature, it’s time you were in bed.

ERIC, THEA, AND ELLA SAW WILMA WHEN ADRIAN LEFT.

Eric Wind is a character in Nabokov’s *Pnin*, but the Elsie’s don’t seem to care. In fact, the beautiful fifth Elsie is saying rather pointedly that she wants to go and see a film – any film, even if it’s *Song of Norway*. Let me oblige the poor girl by showing her a miraculous piece of Scandinavian journalism. Am I being serious? Oh, yes! For a miracle was wrought on 16 August 2008, when the following seven words appeared in the Icelandic newspaper *Morgunblaðið*:

David Crookes flytur erindi um tölvísi heimsmyndar

(= David Crookes is giving a lecture on cosmographical mathematics).

Start reading on the F of *flytur*, leave seven-letter gaps, and you will discern the English word FILM.

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

If the fifth Elsie and her friends are still unimpressed, they deserve to be confronted with an encodement of their two favourite English words.

Here beginneth the third chapter of a frightful novel called *Dido Output in Tolstoy*. (Don’t go looking for stupid cryptograms in the title.)

My grandmother had warned me that the sin-vent city of Las Vegas would convert us all into different persons. I understood now what she meant as I watched my four friends smiling, adding sweetener to their coffee, and preparing to gamble for big money. Capricious Meg had turned herself into a serious-minded young woman simply by getting rid of her blonde wig. For his part Timothy had completely forgiven Meg for having lied to him about her family in the Andes. Raquel, the hilarious cabaret-dancer of Saturday night, had transformed herself into a Baudelairean *femme fatale*, and it was plain that Ian at least was not displeased by the transformation.

The atmosphere around our table was so heavily charged that I found it difficult to concentrate on the game. My four companions had suddenly become persons of tremendous gravity. They were no mere gamblers. They were ambassadors from the sombre realms of Art Nouveau. When they spoke, their words were freighted with inarticulate power. When they chose

not to speak, their very silence was characterized by a palpable pulsation. Time itself seemed to have stopped. I felt uneasy. In fact, I felt *afraid*. A holstered security guard had stopped to watch our table.

I sensed that powerful forces would soon assert themselves.

And they did.

Twice in the course of that evening an atmospheric current expressed itself in an apparently trivial action.

When Meg drank from Timothy's glass, I was certain that something wonderful, something far more profound than mere romance, had come into being.

And when Raquel used Ian's dice, I was sure that a clandestine love existed, at some glorious level, between the exotic dancer and the taciturn librarian.

Do you like the story?

Then you can finish it off yourself. Writing those seven Throbdinagian paragraphs nearly killed me.

Mind you, I wrote the *seventh* paragraph with a certain purpose.

The Elsie's are bound to 'marvel greatly' when they analyze the following seventeen words.

And when Raquel used Ian's dice, I was sure that a clandestine love existed, at some glorious.....

If you want to join the Elsie's in their analysis, you should start reading on the first E, and leave three-letter gaps.

AND WHEN RAQUEL USED IAN'S DICE, I WAS SURE THAT
A CLANDESTINE LOVE EXISTED, AT SOME GLORIOUS.....

Isn't that rare?

EQUIDISTANT LETTERS in a dime novel!

Of course the prose is ghastly, but the equidistant letters are pretty impressive.

No less than eighteen significant letters appear inside a group of sixty-nine consecutive letters.

Compare that with four significant letters out of one hundred and fifty-one consecutive letters in each of the two torah-grams which actually work.

'I wish you would try to take what we do more seriously,' says the third Elsie. 'We work GRIDWISE. And we tend not to accept equidistant letter spacing unless we find *one significant word* running horizontally in proximity to *another significant word* which runs vertically, or diagonally. Your silly little made-up story has no exact criterion. You read everything horizontally.'

Wrong, wrong, wrong! You Elsie's read all your torah-grams horizontally. There's no 'exact criterion' about it, and no precious 'grid'.

If you had the eyes to see a genuine ‘grid’, you would have read chapter 3 of *Dido Output in Tolstoy* with more care. Look at the first four sentences.

My grandmother had warned me that the SIN-RENT city of Las Vegas would convert us all into different persons. I understood now what she meant as I observed my four friends *smiling, adding sweetener* to their coffee, and preparing to gamble for big money. Capricious MEG had turned herself into a serious-minded young woman simply by getting rid of her blonde WIG. For his part Timothy had completely forgiven Meg for having LIED to him about her family in the ANDES.

Then look at the first seventy letters of the last sentence. I’ll set the letters out in a grid. (‘You should write a piano piece,’ whispers Delia, ‘called *Für Elsie*.’)

| | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| A | N | D | W | H | E | <u>N</u> | R | A | Q |
| U | E | <u>L</u> | U | S | E | D | <u>I</u> | A | N |
| S | D | <u>I</u> | C | E | I | <u>W</u> | A | <u>S</u> | S |
| U | R | <u>E</u> | T | H | A | <u>T</u> | A | C | L |
| <u>A</u> | <u>N</u> | <u>D</u> | <u>E</u> | <u>S</u> | T | <u>I</u> | <u>N</u> | E | L |
| O | V | E | E | X | I | S | T | <u>E</u> | D |
| A | T | S | O | <u>M</u> | <u>E</u> | <u>G</u> | L | O | <u>R</u> |

The last letter of LIED (nine-letter spacing) is the middle letter of ANDES (consecutive letters), while the last letter of WIG (nineteen-letter spacing) is also the last letter of MEG (consecutive letters). SIN (read backward with ten-letter spacing) begins on the twenty-ninth letter, while RENT (read backward with ten-letter spacing) begins on the seventieth letter. And I know that you Elsie don’t go in for anagrams, but the letters of all six vocables are contained in three consecutive words of the second sentence: SMILING, ADDING SWEETENER.

Those who like to read ‘gridwise’ will be able to find a whole collection of miracles in the seven words from *Morgunblaðið* which I’ve already quoted.

David Crookes flytur erindi um tölvísi heimsmyndar

(= David Crookes is giving a lecture on cosmographical mathematics).

| | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|
| D | A | V | <u>I</u> | <u>D</u> | C | R | O |
| O | K | <u>E</u> | <u>S</u> | <u>F</u> | L | Y | <u>T</u> |
| <u>U</u> | <u>R</u> | <u>E</u> | <u>R</u> | <u>I</u> | <u>N</u> | <u>D</u> | <u>I</u> |
| <u>U</u> | <u>M</u> | <u>T</u> | Ö | <u>L</u> | <u>V</u> | <u>Í</u> | <u>S</u> |
| <u>I</u> | <u>H</u> | <u>E</u> | <u>I</u> | <u>M</u> | <u>S</u> | <u>M</u> | Y |
| N | D | <u>A</u> | <u>R</u> | | | | |

See if you can find all thirty of the underlined grid-letters in the horizontal lines of letters which follow. I'll leave you to define each letter-spacing for yourself.

Two verbal miracles relate to SPACE and TIME.

The speaker came from the British part of ERIN (= Ireland). That fact is proclaimed by the first four letters of the word *erindi*.

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

At the time he was fifty-six years old (LVI = 56 in Roman numerical notation).

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

People remarked more than once that the light in the lecture-hall was rather DIM.

DAVID D CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

At several points in his lecture the speaker used the Icelandic verb ERU (= are).

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

After giving his lecture the speaker was able to SIT down and drink HIS TEA. (The word SIT should be read backward, like the second example of the word ERU, shown above.)

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

Of course the miraculous grid embraces music, history, and science. Five of the words from *Morgunblaðið* enfold the forename of the Finnish musician REMU Aaltonen. Read backward, starting on the last letter of HEIMSMYNDAR.

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

The name of IFNI is concealed in a different manner. Read forward, starting on the fourth letter of DAVID. IFNI was formerly a Spanish province on the Atlantic coast of Morocco.

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

One last marvel. You'll find the surname of the physicist Elmer Samuel IMES if you read backward, starting on the last letter of TÖLVÍSI.

DAVID CROOKES FLYTUR ERINDI UM TÖLVÍSI HEIMSMYNDAR

Hey! Something is definitely wrong. The Elsies have decided not to stay. I mean to say, they're *leaving*. Miss Benn escorts them courteously to the door.

The Delia who returns is distempered with mirth. 'Four of the five Elsies are in a *frightful* state of anger,' she gasps. 'You should see them! Gashing themselves with knives, according to their manner.' Then she becomes solemn. 'Here's what I've been asked to tell you,' Miss Benn intones. 'The Elsies object to frivolous games which have no exact criterion, and they dislike inept riddles.'

Don't laugh, but there is a hidden message in that statement of displeasure. If you want to find it, start reading on the first letter, and leave eight-letter gaps.

THE ELSIES OBJECT TO FRIVOLOUS GAMES
WHICH HAVE NO EXACT CRITERION
AND THEY DISLIKE INEPT RIDDLES

Here is another miracle. RAIN is beginning to fall outside, and the timing, as the Elsies would say, 'cannot be without significance'. I have on my desk a three-line epigram by Archdeacon Blennerhassett Blane, whose father is a great turner of wooden vases. Blane wrote the epigram when he left university and returned to a happy evangelical home.

*wooden jars and wooden jars
fair haven idyll
excelling the drab college*

Start reading on the ninth letter, and leave eleven-letter gaps.

WOODEN JARS AND WOODEN JARS
FAIR HAVEN IDYLL
EXCELLING THE DRAB COLLEGE

The archdeacon is unaware that his epigram encodes a pluvial prophecy in one of its equidistant letter sequences. (He is also unaware that in 800 English gematria his twelve poetic words add up to 4347, which is both the pentagonal number of fifty-four and the heptagonal number of forty-two.) Blane senior thought so well of the epigram that he carved it on a limewood panel. His wife Tilia, proud on two counts, hung the panel in her kitchen.

Until recently Blane and I attended the same sparring class on Tuesday nights. The archdeacon annoys me by excelling in realms where I am useless, like cricket and diving. I must show him some day how the word DIVE appears in the first of his so-called 'Thulean epigrams'. Start reading on the fifth letter.....

*deluded midwinter
lava invaded
ash*

.....and leave six-letter gaps. (The epigram happens to have an 800 English gematric value of 2273, which is the sum of five consecutive prime numbers.)

DELUDED MIDWINTER LAVA INVADED ASH

Two years ago, when Blane became president of the North Tyrone Music Festival, he destroyed an uncouth radio interviewer with six miraculous words.

INTERVIEWER Blennie Blane, you're the new president of the NTMF.
BLANE I know that, you complete fool.

Start reading Blane's sentence on the third letter, and leave five-letter gaps.

Do any readers still believe in Bible-codery? Those readers must answer two questions. Why can the Bible-codebreakers produce only the merest scraps of language? Why can they not produce a seven-word sentence like Psalm 114. 7? Silence is an answer. He that hath ears to hear, let him hear! Or as people used to say on the island of Sark, *L'chen qu'a d's oureilles pour ouit qu' il ouët*. We shall return to the contents page of the Hebrew Bible.

The prophecy which appears on that page is set out below in the manner of a crossword. Read the vertical word (yodh-qoph-resh-aleph = *he shall be called*) from top to bottom, and read the horizontal word (nun-tzaddi-resh-yodh = *a Nazarene*) from right to left.

| | | | |
|-------|-------|-------|-------|
| [] | [י] | [] | [] |
| [] | [ק] | [] | [] |
| [י] | [ר] | [צ] | [נ] |
| [] | [נ] | [] | [] |

Here are the letters of the prophecy, spelled out for English readers. Their place-numbers are underlined, and their 400 gematric values are given in brackets.

40 (yodh = 10)

80 (qoph = 100)

74 (nun = 50) 83 (tzaddi = 90) 93 (resh = 200) 100 (yodh = 10)

98 (aleph = 1)

A notable miracle hath been done. Seven Hebrew letters detach themselves from the names of Old Testament writers, and combine to form an important sentence of the New Testament. Once we discern how the prophecy is constituted, we can sing an old hymn with new understanding.

*I stand amazed in the presence
Of Jesus the Nazarene.....*

And once we understand the 'hidden things' of Isaiah 48. 6, we can construe the preceding verses specifically in terms of the coming Messiah.

3 *I have declared the former things from the beginning; and they went forth out of my mouth, and I shewed them; I did them suddenly, and they came to pass.*

4 *Because I knew that thou art obstinate, and thy neck is an iron sinew, and thy brow brass;*

5 *I have even from the beginning declared it to thee; before it came to pass I shewed it thee: lest thou shouldest say, Mine idol hath done them, and my graven image, and my molten image, hath commanded them.*

6 *Thou hast heard, see all this; and will not ye declare it? I have shewed thee new things from this time, even HIDDEN THINGS, and thou didst not know them.*

hidden things = נצרות

The consideration of hidden prophecies relating to Nazareth has led us gently into the world of CRYPTANALYSIS. Let me confess now that most of the chapters which follow are much concerned with that world.

'Hold on,' says one reader, who turns out to be Rosie Stone. 'I know NOTHING about cryptanalysis. Can the author give me a brief introduction to the subject?'

'I'm not sure,' says another reader, who turns out to be a librarian in the local university. 'Is the author *qualified* to give you such an introduction?'

The poor librarian is looking rather miserable, and no wonder. His lunch, which he is eating out of a plastic box, consists of a salad. Delia is appalled to see a man voluntarily feeding on lettuce. But never mind! I like to keep everyone happy, so I'll do my best in chapter 12 to answer the questions of both readers.

'Wait a minute,' says Miss Benn, who has opened Snaith's edition of the Hebrew Bible. 'I want to ask you something.'

Go ahead.

'I'm starting to find my way around the Hebrew alphabet,' says Delia. 'Look at the book of Obadiah. It begins on page 904.' She pauses. 'The name of OBADIAH in the heading is spelled with *five* letters: ayin, beth, daleth, yodh, and he. Is that right?'

עבדיה

It is indeed.

'Then look at how the name of OBADIAH is spelled in the contents,' Delia continues. 'There are *six* letters here: ayin, *wau*, beth, daleth, yodh, and he.'

עובדיה

So there are.

‘You’d think that whoever wrote the contents page needed to use an extra letter,’ says Delia. ‘Does it take that extra letter to make the prophetic sum add up?’

The answer to Delia’s acute question is YES. You see, the ‘extra letter’ of which she speaks is a optional W which doesn’t change the sound of the word. Think of the two English words LO and LOW, which are identical in sound, even though the second word has an ‘extra’ W. Then think of the actress Judy LOE, and of the author Judy LOWE.

On the contents page of the Hebrew Bible, one hundred letters are used to spell the names of the prophetic books. The optional wau in the name of Obadiah is the SIXTY-FIRST of those letters. In both 400 and 22 Hebrew gematria, wau has a value of SIX. The Nazarene prophecy is written across a lattice of SIXTY-ONE letters, and it has a total 400 gematric value of SIX HUNDRED AND SIXTY-ONE. So the optional wau, having a value of SIX, and coming as letter number SIXTY-ONE in the list of prophets, may be seen as encapsulating the whole cryptogram. *And that wau must have been there before St Matthew wrote his gospel.* (Has Matthew privately added a wau to the contents list of the Hebrew Bible, hoping that his readers will know to add a wau in exactly the same place? Of course not!) Matthew has not devised. He has discovered.

‘But Matthew’s discovery may have given someone else an idea,’ says Rosie. She pauses for a moment. ‘Let me explain what I mean. I’ve been wondering if there’s a deliberate cryptogram on the contents page of the *New Testament.*’ Miss Stone points to one page of her notebook. ‘Is it possible that the names of the four evangelists have been arranged so as to encrypt the identity of the Lord Jesus? In Delia’s Greek New Testament, the four names use a total of twenty-seven letters. Here are the Greek spellings of Matthew, Mark, Luke, and John.’

| | |
|----------------|---|
| MATTHEW | mu-alpha-theta-theta-alpha-iota-omicron-sigma |
| MARK | mu-alpha-rho-kappa-omicron-sigma |
| LUKE | lambda-omicron-epsilon-kappa-alpha-sigma |
| JOHN | iota-omega-alpha-nu-nu-eta-sigma |

‘And here are the four names with their letters numbered,’ Rosie goes on.

MATTHEW

mu (1), alpha (2), theta (3), theta (4), alpha (5), iota (6), omicron (7), sigma (8)

MARK

mu (9), alpha (10), rho (11), kappa (12), omicron (13), sigma (14)

LUKE

lambda (15), omicron (16), epsilon (17), kappa (18), alpha (19), sigma (20)

JOHN

iota (21), omega (22), alpha (23), nu (24), nu (25), eta (26), sigma (27)

‘Now look at the four words which emerge.’ Rosie sets four cards on the table. ‘By the way, I’m representing the four words in terms of 24 Greek gematria.’

**Letter no 17 + letter no 21 + letter no 16 + letter no 8 = 62
upsilon-iota-omicron-sigma = ‘SON’
[upsilon = 20] + [iota = 9] + [omicron = 15] + [sigma = 18] = 62**

**Letter no 16 + letter no 24 + letter no 13
+ letter no 1 + letter no 2 = 56
omicron-nu-omicron-mu-alpha = ‘NAME’
[omicron = 15] + [nu = 13] + [omicron = 15]
+ [mu = 12] + [alpha = 1] = 56**

**Letter no 6 + letter no 26 + letter no 8 + letter no 16
+ letter no 17 + letter no 14 = 87
iota-eta-sigma-omicron-upsilon-sigma = ‘JESUS’
[iota = 9] + [eta = 7] + [sigma = 18] + [omicron = 15]
+ [upsilon = 20] + [sigma = 18] = 87**

**Letter no 12 + letter no 17 + letter no 11 + letter no 6
+ letter no 16 + letter no 27 = 89
kappa-upsilon-rho-iota-omicron-sigma = ‘LORD’
[kappa = 10] + [upsilon = 20] + [rho = 17] + [iota = 9]
+ [omicron = 15] + [sigma = 18] = 89**

‘Here’s the message of the four words,’ Rosie concludes. ‘The One who is both SON of Man and SON of God bears the NAME of JESUS, and he is LORD of all.’

I reckon that Rosie has discovered something of great importance.

But if the four-word Greek cryptogram was devised on the analogy of the two-word Hebrew cryptogram, it should show some evidence of its connection.

‘It does!’ says Delia. ‘And the evidence is *numerical*.’ She pauses. ‘In 22 Hebrew gematria the Nazarene cryptogram adds up to 112.’

Miss Benn has already begun to write on a loose page.

yodh-qoph-resch-aleph nun-tzaddi-resch-yodh (= He shall be called a Nazarene).

$$[10 + 19 + 20 + 1] + [14 + 18 + 20 + 10] = 112$$

‘Furthermore, in 24 *Greek gematria*,’ Delia continues, ‘the four words which Rosie has found add up to 294.’ She writes once again.

upsilon-iota-omicron-sigma omicron-nu-omicron-mu-alpha

iota-eta-sigma-omicron-epsilon-sigma kappa-epsilon-rho-iota-omicron-sigma

$$[20 + 9 + 15 + 18] + [15 + 13 + 15 + 12 + 1]$$

$$+ [9 + 7 + 18 + 15 + 20 + 18] + [10 + 20 + 17 + 9 + 15 + 18] = 294$$

‘Now watch,’ says Miss Benn. ‘The gematric number 112 may be seen as akin to the gematric number 294.’ She writes for the last time.

$$112 = 7 \times [4 \text{ to the power } 2], \text{ and } 294 = 7 \times 42$$

Spectacular, Delia! Well done, dear. And well done, Rosie! You two ladies are going to have no bother with cryptanalysis. You’ll be able to walk your way through the next chapter.

I’ve been so lucky, as that nice girl Agnetha Fältskog used to sing. (Sorry, I mean that I’m blessed with good interlocutors. Many of my friends teach in universities. Some of them have to contend with squealing victimologists who can neither read books, nor write English, nor add up numbers.)

Delia and Rosie seem to have floated out of Christopher Trottier’s poem ‘Stranger in a Strange Land’:

*Women of the fountain of youth
quick and fluid like gazelles.....*

When they look at the names of the Biblical books they are able to see, as Swinburne says in one of his long lines,

*Each tree-top and branchlet a pinnacle jewelled and carved,
or a fountain that shines as it showers.....*

Roger McGough in ‘Poem Five’ writes,

*For twenty-four hours a day, fountains play,
Spraying graffiti.....*

Delia and Rosie are prepared both to frolic in the fountain of literature, and to study the cryptic ‘graffiti’ which everyone else ignores.

They can handle both the graffiti and the fountain of Gabriel DeCrease’s rather difficult poem ‘Untitled’:

*There is a watchtower before the prison cemetery.....where the
unknowable graffiti can sit the night watch. Graffiti, if you can do this, I
will ask you what you mean.....*

*Does Vienna recall my falls from its balconies? One broken by deep
water of a fountain.*

‘Oh, stop it,’ says the librarian. ‘I’ve never heard so much folly in my life. What has cryptanalysis got to do with frolicking in a fountain, or falling from a balcony?’

Quite a lot. The person who wants to be a cryptanalyst has to display a special kind of *fluidity*. If you’re going to engage in serious cryptanalysis, you must not be totally serious as a person. Here’s what I mean. You must not take yourself, your own notions, and your own works with complete seriousness. It isn’t enough for you to read ‘set’ books, or even to read books. You must lead an active mental life *in several different arenas*: because when you come to practise what is the most meticulous discipline in the world, you need to have more behind you than a life of earnest microscopy. You need to have run through dense forests. You need to have swum in cold lakes. You need to have drunk from secret fountains. You need to have roamed, as William Cullen Bryant said,

*By DISTANT wood and lake,
Where DISTANT fountains break
From the ground.*

‘You need to have DONE things!’ says Delia. ‘Look. On Sunday I heard a certain preacher explaining what John the Baptist said about the axe being laid to the root of the trees. Why was I able to listen to that preacher with respect? Because on the previous day I had watched him reduce a large tree-stump to chips with a hatchet.’ Miss Benn pauses. ‘I don’t listen to *everyone* with respect. My cousin Torquil is an archaeomusicologist who imagines himself to be an expert on steam-trains. Now Torquil can sit all day in a library and suck up any amount of information through the barrel of his mental microscope, but he can’t be trusted to talk sense. Last winter he paid someone to make him a replica of an ancient lyre. Then he tuned the lyre in some terribly clever manner, and proclaimed to the world that *it sounded right!*’ Delia yawns helplessly. ‘Years ago Torquil took me for a trip on a vintage steam-train. Over and over again he claimed to hear particular things going on in the engine. I couldn’t believe him, because we were sitting in the last-but-one carriage.’ Miss Benn yawns again. ‘Sorry, dear! Go back to telling your readers about microscopy.’

All right. Hello again, all ye who want to become cryptanalysts. Here is a strange fact. In the early stages of your apprenticeship you’ll often find your microscope turning into a kaleidoscope. Say you’re beginning to study Icelandic. After dinner one night you stand by the high desk in your study, and set yourself to learn the declension of the Icelandic word for *cat*.

| CASE | SINGULAR | PLURAL |
|------------|---------------|---------------|
| nominative | <i>köttur</i> | <i>kettir</i> |
| accusative | <i>kött</i> | <i>ketti</i> |
| genitive | <i>kattar</i> | <i>katta</i> |
| dative | <i>ketti</i> | <i>köttum</i> |

Köttur is not what you’d call a bag of laughs. The only way to learn its eight forms is to write them out, and say them out loud, over and over again. (Let me repeat the old musical dictum. An amateur practises until he gets something right. A professional practises until he can’t get it wrong.)

Well, you learn the eight forms. Then you go out to swim. For most of the next hour, your newly stocked mind relaxes by behaving in the manner of a kaleidoscope. Before long the declension of *köttur* becomes octuply evocative.

KÖTTUR evokes both the German poet Goethe and his poem '*Das Göttliche*'.
KÖTT evokes a line from *Tristan und Isolde* which T S Eliot quotes in 'The Waste Land': *Öd und leer das Meer*.
KATTAR evokes Catherine of Aragon.
Dative singular KETTI evokes the Cutty Sark, a famous British ship.
KETTIR evokes *Grettis Saga* (The Saga of Grettir the Strong).
Accusative plural KETTI evokes the celebrated double bass virtuoso, Domenico Dragonetti.
KATTA evokes the two Greek words *κατα Μαρκον* (= *kata Markon*, according to Mark).
Finally, KÖTTUM evokes the White Cat costume which the ballerina Sterling Hyltin wore in a memorable performance of *Sleeping Beauty*.

'That is all *complete madness!*' cries the librarian. 'Why am I wasting my time with you people?'

'I don't know,' says Delia. 'Tell me something, Lettuce Boy.' She pauses. 'Have you ever solved a serious cryptogram in your life?'

'No!' shouts the librarian.

'Have you ever as an adult written a poem, acted in a play, painted a picture, composed a piece of music, performed in a concert, or made some beautiful thing with your hands?'

'No,' replies the librarian sullenly.

'Then you have no right to speak,' says Delia. 'Cryptographers are creative people. You're *not* a creative person, and you don't know how the mind of a creative person works. Your ignorance qualifies you only to be silent.' She pauses. 'Creative people engage in fierce mental and physical disciplines of which uncreative people know NOTHING. If you believe that those disciplines are *folly* and *madness*, you really are the most frantic ass. You're like a blind and deaf man who believes that the carnation and the canary are mere illusions.'

'I'm not!' shrieks the librarian.

'Yes, you are,' says Delia. 'Be quiet and listen.' She regards her victim sternly. 'You can forbid words to dance in your brain if you want. That's all right! Maybe you get some great thrill out of *watching serial dramas on television*. But creative people are different from you. Your rules don't apply to creative people.' Delia pauses. 'Which is lucky for them. I mean, your notions of wisdom and sanity characterize the sort of barbarian who is content to work, and eat, and use the bathroom.'

'You are insulting me horribly,' says the librarian.

‘What were you doing when you accused another person of folly and madness?’ Delia asks sweetly. ‘Smug circumscribed sanity is nothing more than slow mental death. Stop grunting, and listen to what I’m saying.’ She pauses. ‘You mustn’t try to judge the wisdom and sanity of creative people in accordance with your own dull rules. Get this. *Your rules don’t apply to creative people.* They don’t apply to a psalmist like David. They don’t apply to a novelist like Nabokov. They don’t apply to a poet like Ariosto. And they don’t apply to a person *like me.*’ Delia is soaring on giant wings. ‘Where do you work, Lettuce Boy?’

‘In a library,’ replies the seething librarian.

‘That’s nice for you,’ says Miss Benn. ‘Now hear *my* tale. I’m an actress. Do you think I memorize my lines like a schoolgirl learning Latin verbs, so that I can produce them from my memory whenever I’m onstage?’ Delia looks into the distance. ‘Let me tell you what I do to many of the individual words of every line that I ever learn. I put the individual word into a kaleidoscope. I twist it around. I sing it at different pitches. I shout it. I whisper it. I link it variously with the words that precede it. I link it variously with the words that follow it. And above all, I THINK.’ She pauses. ‘In certain cases, I ask myself a number of questions. Does the particular word on which I’m concentrating *remind* me of any other word? Does it *rhyme* with any other word? Does it *alliterate* with any of its companion words? Does it possess more *gravity* than I might expect it to possess? Or is it meant to stand for a word that might be *dangerous to say*? You know how Schiller used the word *Freude*, which means JOY, to stand for *Freiheit*, which means FREEDOM.’

‘I didn’t know that,’ says Lettuce Boy.

‘Then I’m glad I was able to help you.’ Delia inhales imperiously. ‘Listen! Words take on LIFE when a competent author uses them deliberately.’ She pauses. ‘The words that a dramatist writes are potent things. If they are properly declaimed by an actress, those words will duly cause the members of an audience to see visions and dream dreams. But if I’m going to be the actress who declaims those words properly, I must engage in a host of different disciplines when I’m learning my lines.’

‘What sort of disciplines do you mean?’ asks the librarian.

‘Let me tell you what only two people know,’ says Delia. ‘I made my *début* as Penthesilea in a perfectly dismal play by Kleist. A man with whom you are acquainted helped me to *declaim my words properly*. That man was my tutor for two years. He compelled me to place myself and my words in a kaleidoscope which often felt more like a torture-chamber. Fifty times he got me to put four pebbles in my mouth, and made me recite my speeches *clearly*. Forty times he got me to lie on the floor with a hundredweight bag of sand set over my stomach, and made me recite my speeches *merrily*. Thirty times he made me recite my speeches *at top volume* in the total darkness of a small cupboard. Twenty times during the months of November and December he got me to stand in a freezing pond with the water up to my neck, and made me recite my speeches *triumphantly*. Ten times he made me hold a forty-pound weight above my head and recite my speeches in the boastful manner of *an exhibition wrestler.*’ Delia

pauses. ‘There’s not a hint of hilarity in *Penthesilea*, but my two-month period of preparation managed to be horrendously brutal and totally hilarious at the same time. I learned to stop taking myself and my own ignorant notions with mad seriousness. I abandoned my own infantile ideas of what was normal, natural, serious, rational, and sensible. Although I was being *severely* tormented, although every word that I had learned was being put through a *cruel* torque test, somehow it was all great fun. Well! Do you know what happened? My declamation of the speeches defeated *and absorbed* the gravity of the pebbles, the hundredweight bag of sand, the dark confining cupboard, the freezing pond, and the forty-pound weight. The curious thing is that when I was saying my lines onstage, I exulted in the liberty of having no difficulty, no weight, no discomfort, and no constriction. Oh, I was working hard, but without making any conscious effort. I felt as if I was flying! The critics said that my performance was fresh, vigorous, assured, mature, highly charged, and altogether commanding. One reviewer declared that the original *Penthesilea* must have looked and sounded exactly like me! Now let me tell you something, Lettuce Boy. When that show came to the end of its two-week run, I was GLAD that I had been tormented. I was GLAD that my words had been torque-tested. I was GLAD that I had learned not to take myself and my own childish notions with mad seriousness. You see, I had become a good actress by engaging in disciplines. And presently, I want to become a good cryptanalyst, so I intend to engage in disciplines.’

‘That goes for me as well,’ says Rosie. ‘Listen, Lettuce Boy. Delia holds a master’s degree in creative literature. So do I. We were fellow-students for two years. In the first year of the course we had to write a thesis on our favourite piece of literature. Delia chose Shakespeare’s play *The Tempest*, and I chose Nabokov’s novel *Invitation to a Beheading*.’ Rosie pauses. ‘In the second year of the course we had to write three stories, a short novel, and four hundred pieces of verse. The disciplines that we underwent were FIERCE. I had nothing else to do, but Delia was working for her degree, and modelling, and managing to establish herself as an actress at the same time. I don’t know how she did it. Anyway! The first year of our course was nearly all *microscope*, if you know what I mean. Analysis, research, study, and learning lots of things by heart. The second year of our course was nearly all *kaleidoscope*, especially when we came to write our four hundred different poems. We had to learn not to take ourselves and our own immature notions with lunatic seriousness. We had to cultivate oneiric habits of mind. Sorry, I mean we had to go into dream-mode. We had to subvert every species of conventional narrowness. We really *did* frolic in verbal fountains, and we really *did* fall from verbal balconies. We had to stand on our heads.’

‘Yes, and above all we had to stand WORDS on their heads,’ says Miss Benn.

‘Why?’ asks Lettuce Boy.

‘Because for a creative person that is an important part of *growing up*,’ Delia replies. ‘Look, I’ll tell you what one of our tutors told us once.’ She rises to her feet, and walks over to the window. ‘The best and most diligent of modern students are inclined to take themselves far too seriously. They accept the world as it is presently constituted, because they are concerned to have successful careers in that world. That’s why many of the Archetypal Good Boys and Girls who go into academic life on the literary side don’t want to *find out* things. They

want to win the approval of the academic community. They want in time to become fine tuners of the *status quo*. So their whole apprenticeship is characterized not by curiosity, but by blinkered obedience. They study only those texts which other people compel or advise them to study. Why do they read in libraries? So that they may write in examination halls. Throughout their student days they cultivate the habit of earnest deference. When at length these Good Boys and Girls find employment in the booby-world of received ideas, they continue to live a life of earnest deference.’ Miss Benn pauses. ‘Obsessively they chant words like *post-exilic* and *postcolonial*. Being defined for ever in the booby-world by the exams that they passed in their twenties, they are allowed to rule over the lily-ponds of Lilliput without making any big discoveries. Oh, they work hard. They study solemnly. They even write books and articles. But to the extent that they study and write in accordance with the rules of a lodge, what they do is largely worthless. Solomon was talking about worthless academic work when he said, *Of making many books there is no end; and much study is a weariness of the flesh.*’ Delia returns to her seat. ‘Hear the conclusion of the whole matter. The person who spends his life in worthless academic work *never grows up*. He resembles a fourteen-year-old boy whose bespectacled little soul is thrilled when he is elected to the committee of the School Stamp Collecting Society. If you want to be a creative person, you have to *grow up*.’

‘By cultivating oneiric habits of mind,’ Lettuce Boy mutters.

‘Yes! By disciplining yourself to dream,’ says Miss Benn. ‘Any truly creative person is a disciplined dreamer.’ She pauses. ‘No one should apologize for dreaming. Almighty God has given us the faculty of dreaming at night. In our happy dreams we’re often surprised at the great EASE with which we can do some thing that we’ve never *learned* to do. I mean, not long ago I dreamed that I was playing a trombone in a marching band, but I’ve never had a trombone lesson in my life.’ Delia gracefully stifles a yawn. ‘Do you remember the oneiric piece of Joel that St Peter quoted on the day of Pentecost?’

‘*Your young men shall see visions,*’ says Lettuce Boy, ‘*and your old men shall dream dreams.*’

‘That’s right!’ Delia rubs her eyes slowly. ‘Well, herein is a marvellous thing. Peter’s listeners were neither seeing visions nor dreaming dreams. Yet not one of them objected to the quotation of Joel’s prophecy as irrelevant. All of Peter’s listeners recognized that Joel had been talking about the DREAM-LIKE EASE with which certain Galileans would be able to speak in languages that they had never learned.....’

‘And the DREAM-LIKE EASE with which a multitude of listeners would understand the speech of the Galileans,’ Rosie interjects.

‘Correct,’ says Delia. ‘Now listen, Lettuce Boy. Creative persons work with colours, or words, or musical notes, or physical movements, so as to make people apprehend *in an oneiric manner* whatever the artwork is.’ She pauses. ‘It’s funny. When Rosie and I were doing our course, we had to learn by heart many oneiric passages of literature that serious-minded losers would call *mad*.’

‘Quite a few of those passages came from the Bible,’ says Rosie. ‘Speak, ye that ride on white asses, ye that sit in judgment, and walk by the way.’

Delia isn't riding on a white ass, but she speaks anyway. 'Then were the horsehoofs broken by means of the pransings, the pransings of their mighty ones.'

Rosie speaks. 'Though ye have lien among the pots, yet shall ye be as the wings of a dove covered with silver, and her feathers with yellow gold.'

Delia speaks. 'There went up a smoke out of his nostrils, and fire out of his mouth devoured: coals were kindled by it.'

Rosie speaks. 'The mountains skipped like rams, and the little hills like lambs.'

Delia speaks. 'Or ever I was aware, my soul made me like the chariots of Amminadib.'

Rosie speaks. 'The mountains saw thee, and they trembled: the overflowing of the water passed by: the deep uttered his voice, and lifted up his hands on high.'

Delia speaks. 'And as I may so say, Levi also, who received tithes, paid tithes in Abraham. For he was yet in the loins of his father, when Melchisedec met him.'

Rosie speaks. 'For this they willingly are ignorant of, that by the word of God the heavens were of old, and the earth standing out of the water and in the water.'

Delia speaks. 'Canst thou bind the sweet influences of Pleiades, or loose the bands of Orion?'

Rosie speaks her way resolutely through a yawn. 'He will surely violently turn and toss thee like a ball into a large country.'

Delia speaks. 'He shall spread forth his hands in the midst of them, as he that swimmeth spreadeth forth his hands to swim.'

Rosie speaks. 'Like sheep they are laid in the grave; death shall feed on them.'

Delia speaks. 'Then the Lord awaked as one out of sleep, and like a mighty man that shouteth by reason of wine.' She pauses. 'Are you getting the idea, Lettuce Boy?'

'Yes,' replies the physicist.

'Oh, good,' says Delia. 'An incorrigible barbarian would have said *No*.' She pauses. 'Uncreative people will think it stupid to link the different forms of an Icelandic noun with Goethe, T S Eliot, Grettir the Strong, and the White Cat costume from *Sleeping Beauty*. But creative people **MUST** be able to make links of that kind if they're going to create anything. I mean, Goethe and T S Eliot and Grettir the Strong belong to the same intellectual fitness centre as the pebbles and the pond and the fifty-pound weight that I told you about.'

'Do you think the psalmists used your kind of intellectual fitness centre?' asks Lettuce Boy wonderingly.

‘Of course they did,’ Delia replies.

‘Yes.’ Rosie speaks in the voice of a weary four-year-old child. ‘David was very interested in pebbles.’

So was Goethe. Creative people are always looking for a stream like the one that Goethe describes.

*Durch die Gipfelgänge
Jagt er bunten Kiesel nach.....*

Through the mountain passes
It chases coloured pebbles.....

Sometimes they get more than they were expecting. Listen to Li Bai.

飛 湍 瀑 流 爭 喧 豗

(= Racing cascades of water thunder at each other as they flow:

礮 崖 轉 石 萬 壑 雷

Ten thousand plunging torrents roar as they drive the pebbles before them).

Nizar Qabbani is an altogether meticulous creator. He is prepared to write

على كلِّ غصنٍ ، و كلِّ حصةٍ ، و كلِّ حجرٍ

(= upon every branch, and every pebble, and every rock).

Creative people often want to emulate the being in Victor Hugo’s poem who

cherchant le caillou, trouve le diamant

(= finds a diamond while looking for a pebble).

But on a good day the creative person, as Henri de Régnier says,

Préfère au diamant le caillou de la route

(= Would rather have a roadside pebble than a diamond).

And on a very good day the creative person will remind you of *Bhagavadgita* 6. 8.

ज्ञानविज्ञानतृप्तात्मा कूटस्थो विजितेन्द्रियः ।

युक्त इत्युच्यते योगी समलोष्टाश्मकाञ्चनः ॥६-८॥

(= A man is said to be stable-minded, and is called a master, when he is made complete by learning and understanding. Such a man lives in the spiritual dimension and controls himself. He sees everything as equally valid: an earthen clod, a pebble, and gold.)

‘Oh, do be quiet, dear!’ There is a rapier of lapis lazuli in Delia’s eyes. ‘Stop posing with your schoolboy collection of pebbles. For no reason you’re afflicting us with what the Macedonian poet Koco Racin calls *niski kamenja studeni* -- strings of cold stones. Sometimes you really are the most appalling bore.’ Miss Benn pauses. ‘We’re going to forget about pebbles for a while. I know how to get Lettuce Boy into the fitness centre.’

The librarian looks terrified, and no wonder.

I feel a bit scared myself.

For the first time in years an old Scots Gaelic blessing has come into my head.

Cuiridh mi clach air do chàrn (= I'll put a stone on your cairn).

'Listen, you.' Delia regards her victim thoughtfully. 'I know how to get you into Lewis Carroll mode. Think about the basic atoms of language.'

'Do you mean *letters*?' Lettuce Boy asks timidly.

'Yes!' Miss Benn looks over at the fire. 'Some of the Psalmists turned the twenty-two letters of the Hebrew alphabet into an exercising machine.' She pauses. 'What's your proper name, Lettuce Boy?'

'Ian,' the librarian answers.

'Begin with *Ian*, then.' Delia thinks for a moment. 'Don't use all twenty-six letters of the English alphabet. Confine yourself to *three letters*.' She pauses. 'Here's what I mean. Take the three letters of your Christian name, and turn them into an acrostical poem. Look, I'll start you off.' And without any period of gestation, Miss Benn delivers twelve ingenious nuggets of verse.

'I am not
Insipid and nerdish:
I attract nymphs.

'I abominate nonsense!
I avoid nebulous
Ideas and notions.

'I admire Newton!
I abhor numerology,
Indigestion, and narcolepsy.

'Imbibing ambrosial nectar,
I advance now
Into artistic nirvana.'

It is plain that Lettuce Boy has been somewhat affected. 'Your use of words is *unbelievable*,' he says at length. 'Thank you very much. All of you.' He rises to his feet. 'I'd better be going.'

'Write your own I-A-N poem when you get home,' says Delia. 'Then track down the only surviving record of Virginia Woolf's voice, and listen to it *ten times*. Once you've drunk in what she says, read Psalm 119, and try to find out something about its alphabetical structure.' She pauses. 'Once you create some piece of art yourself, you'll appreciate the creation of another artist in a new way.'

'I want to *paint*,' says Lettuce Boy. 'I wonder how my stepsister will react to the idea.' *His stepsister is a stern bespectacled termagant*, one reader thinks.

'She's bound to be very pleased if you do something creative,' says Rosie. 'What does your stepsister do, Ian?'

‘Jane plays violin in a professional orchestra, and sings in baroque operas.’
Lettuce Boy speaks with awe. ‘In her spare time she maintains a herb-garden.’

‘That is *amazing*,’ says Delia. ‘You must bring her to meet us some time. Soon.’

‘I promise to do that. By the way, neither of us ever uses the *step*-word.’ Lettuce Boy smiles. ‘Look, I’ll see myself out. Goodbye, everyone.’ He leaves the room.

Well done, Delia. You look exhausted. Well done!

‘The things that Rosie said were very important,’ says Miss Benn quietly.

So they were, and I’m grateful to both of you. The Latin word for ‘smile’ is *risus*. Because of what you two girls have done, Lettuce Boy is no longer Risus Negative. With a bit of help, he may turn into a cryptanalyst. Or even an artist. I mean, if his sister is the violinist and singer whom I have often painted, then Ian has a wonderful creative example to follow. Any man who addresses a piece of verse to the said lady will feel compelled to say what the great Slovene poet France Prešeren said to Julija Primic:

*Bolj ko Delije, Korine, Cintije al Lavre
bi bilo pozábit' škoda tvojega imena*

(= To forget *your* name would represent a greater loss
Than to forget the names of Delia, Corinna, Cynthia, and Laura).

Next time we see Lettuce Boy, we’ll remind him of Nietzsche’s command:

.....ihr höheren Menschen, lernt mir – lachen!

(= oblige me, you higher men, by learning -- to laugh!).

If Ian wants to engage in cryptanalysis, he should take example from the wild ass in Job 39. 7, which SCORNETH the multitude of the city. Or from the horse in Job 39. 22, which MOCKETH at fear. Or from the leviathan in Job 41. 29, which LAUGHETH at the shaking of a spear. Or from the beasts of the field in Job. 40. 20, which PLAY in the mountains. In fact, Lettuce Boy should listen to the advice of Harold Begbie:

At laughter’s fountain drink your fill.....

But now Rosie is beginning to slice up two honey melons, and in my memory there sounds a fragment of Uyghur folksong: *Davançiñniği yeri qattiq, tavuzi tatliq* (= Davancheng’s earth is hard, watermelon is sweet). Before we stop for a break, let me address all of my readers, including the fifth Elsie and her friends. While you’re drinking at the fountain of chapter 12, please keep in mind that I’ve undertaken to answer a pair of questions.

Rosie said, ‘I know NOTHING about cryptanalysis. Can the author give me a brief introduction to the subject?’ And Lettuce Boy said, ‘I’m not sure. Is the author *qualified* to give you such an introduction?’

Enough! We’ll eat the melons. Or rather, we’ll eat them in a moment. As soon as we’ve heard from the Polish poet Zbigniew Herbert.

Kamyki nie dają się oswoić (= Pebbles can’t be tamed).

CHAPTER 12: BY THE WAY OF THE SPIES

Ingenuous boy, warned by experience, now
The pebble's charms shall tempt thine eyes no more.....
Amelia Opie, 'Stanzas to Cynthia'

Only the fidgety sheep
watched the perilous future king
pick the pebbles for his sling.....
Martin A Ramos, 'Marigolds'

Years ago I used to work in a market garden, so whenever I see marigolds I tend to recognize them for what they are.

People who work in the world of secret intelligence know what PUBLISHED CRYPTOGRAMS are.

Once, during the final phase of the Cold War, the horticultural section of a Belfast newspaper carried an article which was written under the name of the accepted gardening correspondent. The said article can only have bemused honest growers of Virginian stock. It bore a strange headline.

This Russian invader is everywhere

Ordinary readers were meant to believe that the author was talking about the Russian vine, which he described as

*.....rejoicing in the delightful 'tongue-roller' of Polygonum
Baldschuanicum (Repeat ten times to get the feel of it).*

In fact, the author was talking about a person who once displayed an interest in polygons by publishing an article on figurate numbers in a mathematical journal. The person was a member of a Brethren church, and was known to be interested in gardening. Brethren are sometimes described quaintly as 'Plymouth Brethren' (*Polygonum Baldschuanicum* = P B).

At that time the person was performing many of his scholarly labours in the *Russian* field. Within a short period he published some work on Pushkin, was commissioned to write a major article for an encyclopedia of Russian literature, gave an evening lecture in the local university on Andrei Bely, translated a Russian booklet about a particular kind of engine, was elected as a member of the Irish Slavists' Association, and contributed to the annual journal of that association.

The words RUSSIAN INVADER implied that the person was an aggressive agent of the Soviet Union, while the word EVERYWHERE implied that he had penetrated many different theatres of the home front.

The person lived in Belfast. By day he worked in a large town called Ballymena, about thirty miles away. Every night the person went for a run along

the shore, close to the motorway and the railway lines. Why am I telling you these perfectly trivial facts? Well, the article began,

Watch out, it could catch you unawares!

The second paragraph ran as follows.

And by the manner it is rampaging along the fence between the M2 motorway and the railway lines, I should reckon that in a matter of a year or two it will have reached the outskirts of Ballymena.

It struck the Slavistical person as curious that one sentence relating to the Russian vine should happen to mention both the exact place where he went for his nightly run, and the town in which he worked.

I forgot to say that the person's first two initials were D and Z. Being a scholarly kind of chap, the author of the article managed to include one difficult proper noun in his fourth paragraph, which began,

It is called the Russian vine as it was found growing in Tadzhikistan in Southern Russia in 1883.

(Tadzhikistan, whose name today is normally spelled *Tajikistan*, was not part of 'Southern Russia' in 1883, but *Russianness* has to be emphasized. What about 'growing'? Well, people 'grow' at school. *Tadzhikistan* contains the initials DZ and the word HIT, plus AKA and the nickname of the vine-person's old school.)

Let's move on! The author thought fit to mention the fence, the railway and the M2 once again. He seemed to have a thing about 'the fence along the railway'.

It is far too vigorous for the average small to medium-sized garden. As already implied, it has a tendency to swamp all in its path. It was well-chosen indeed as a cover for the fence along the railway at the Belfast end of the M2.

Then he continued,

On a garden scale it is best used where there is something quite substantial to cover up, to obscure, or to camouflage.

Why use so many words? In a garden context, to 'cover up' is the same as to 'obscure', which is the same as to 'camouflage'. 'Obscure' is an odd verb to use about a creeper, and 'camouflage' is really a soldier's verb. Aside from those verbs, what is 'something quite substantial'? If the author means an oil-tank, or a garage wall, or a trellised area in which the household bins have their abode, why doesn't he say so? 'Something quite substantial' sounds portentously vague in comparison with the careful precision of 'cover up', 'obscure', and 'camouflage'. It's a bit like saying, 'something on a scale that would have appealed to Fantômas, to Fu Manchu, and to Dr Mabuse'.

The article concluded with a flash of good humour.

Unlike many rampant growers the Russian vine is an attractive invader. But -- give it room and stand back quickly!

'Stand back quickly' is an instruction which appears on fireworks. In Northern Ireland at that time it was not unknown for bombs to go off under people's cars.

The third paragraph of the article had ended with an interesting sentence.

And as it can grow 20 feet in a season, it is hard to miss.

Taken together with 'stand back quickly', the phrase 'hard to miss' may be construed as not altogether blithe and bonny.

The vine-person was able to identify the article's author as someone who had been a bright senior in his old school while he himself was a junior. After cryptically naming himself in a passage at which we have already glanced, the author went on to say of the vine-person,

When I was a young horticulturist it was a comparative variety. Nowadays one almost sees it at every turn.

Most people who read that first sentence will think, 'Misprint. The author means a comparative RARITY.' But he doesn't. 'Young' is positive degree. 'Younger' is comparative degree. The sentence really means,

When I was a YOUNG horticulturist (= school student), the vine-person was a YOUNGER student at the same school.

Look at the sentence which follows.

Nowadays one almost sees it at every turn.

'ALMOST sees it at every turn'? Why not 'sees it at almost every turn'? If 'ALMOST sees it at every turn' sounds appallingly clumsy, its clumsiness has a purpose. '*Almost sees*' indicates the word SEES minus its final letter (SEE). It also points to the letter which is 'almost see', the letter which is pronounced 'see': the letter *cee*, which (once understood for what it is) should be read along with the first letter of IT and the first letter of AT.

[One obscure allusion needs to be explained. During the early 1980s, the vine-person published three 'Turinese Letters' in the Nietzschean manner about vile practices of the musical world. These articles aroused a great deal of anger at the time. EES is almost sees, I is almost *it*, and TURN is almost *Turin*. EES plus I plus TURN makes TURINESE.]

You'll notice something similar if you go back to the sentence beginning, *It was well-chosen indeed as*. Look at the first letters of CHOSEN, INDEED, and AS. The infelicitous hyphen which links WELL and CHOSEN allows the word WELL to function as a kind of cloak.

For its part the opening sentence (*Watch out, it could catch you unawares!*) contains the sort of equidistant letter spacing that you may have encountered in 'Bible Code' books. The fifth Elsie and her friends will have no problems here.

Count backward from the C of CATCH, leave a six-letter gap, and you reach the I of IT. Count backward from the I of IT, leave a six-letter gap, and you reach the A of WATCH. The cryptogram is embraced in five words. It employs the first and fifth words, which rhyme visually (WATCH and CATCH), plus the third or central word (IT). A closer spacing is found in 'something quite substantial'.

The second sentence of the article's fourth paragraph began as follows.

It was introduced to Kew Gardens by way of the St Petersburg Botanical Gardens.....

Why 'by way of', and not simply 'from'? The author has made some effort to follow 'Kew Gardens' with a word whose first letter is B.

Let me canter quickly over a field of tedious detail. The 'Russian invader' article was one of many publications whose authors were at pains to rebuke the vine-person. What for? For being a Big Bad Boy: or in other words, for failing to join

the group of which they themselves were members. That roguish group was actually unsympathetic to honest Anglo-American simplicities.

Now the visible sea of the modern Irish troubles, in which thousands of people lost their lives, was affected by global eddies and skerries whose existence was known to very few. While the vine-person was not employed as a member of any intelligence agency, different groups of people wanted him to work for them. The members of one such group persuaded themselves that he had agreed to do so. Once they realized that he was *not* prepared to work for them, they became afraid that he would share with others the knowledge of their activities which they believed him to have acquired.

Displaying the double-minded deviousness of which only certain men are capable, they created and published a whole collection of cryptograms so as to attack the vine-person at two levels. On the surface they proclaimed, 'You are a Soviet solo agent of great consequence.' Beneath the surface they snarled, 'In truth, you are the complete opposite, *and we know it.*'

Phrases like 'almost sees it at' and 'well-chosen indeed as' exhibit the use of a safety blind. (The 'safety blind' must diminish, augment, obscure, or in some manner spoil what would otherwise be a clearly demonstrable cryptogram.)

In one case the author employs the word SEES, which begins with an S and not with a C. In another case he hyphenates the word WELL to the word CHOSEN. In each case he draws a blind over what he really wants to say. Imagine that you are the individual subject of a cryptic message whose author has employed a good safety blind. You may find it easy to decode the author's cryptogram. You'll find it very hard to tell anyone else about it.

Phrases like 'almost sees it at' and 'well-chosen indeed as' growl their crucial message below the surface of the text. By contrast, the three words 'Kew Gardens by', which are veiled by no safety blind, constitute a slur that floats on the surface along with RUSSIAN INVADER.

The vine-person, who had published verse in a number of journals, found similar slurs appearing elsewhere. One issue of a celebrated weekly magazine contained a cartoon, entitled POET / TASTER, about the mythical Irish hero Finn MacCool. (That 'hero of many talents' has given his name to a famous hostelry on Capitol Hill. His name happens to employ the four vowels A, I, and OO.)

At times the narrator used noticeably baroque expressions which turned out to contain examples of equidistant letter spacing.

On the run from murderous competitors, the youthful Finn MacCool was everywhere recognised as a superior person.

More than a mere warrior, Finn MacCool was a mighty poet.

The cartoon's first frame bore the heading, *One day he played chess against the King of Kerry.* Finn beats the King impossibly on the first move, saying as he does so, 'Pawn to Queen's Bishop 3 and checkmate.' In astonishment the King says to Finn, 'Are you by any chance a Russian at all?'

The King's question is a pointer to his opponent's plausible piece of chess-talk. Finn's words happen to spell out a Russian word with gaps between its letters.

'Pawn to Queen's Bishop 3 and checkmate.'

These gaps vary in length from 'PAWN to QUEEN', that is from a length of FOUR characters to a length of FIVE characters. The words PAWN and QUEEN indicate a message whose letters are separated by alternating groups of *four* and *five* characters. How should we read that message? Well, we start on the first letter, which is P, and leave a *four*-character gap.

P AWNT

We go to the next letter, which is O, and leave a *five*-character gap.

O QUEEN

We go to the next letter, which is S, and leave a *four*-character gap.

S BISH

We go to the next letter, which is O, and leave a *five*-character gap.

O P3AND

That brings us to CH, or to a pair of English letters which may be used to represent X, the twenty-third letter of the Russian alphabet.

CH ECKMATE

When we reach the CH of CHECKMATE, we come to the end of the author's little game. (To say the word 'Checkmate' is effectively to declare that a game of chess is over.) What word have we spelled?

P O S O CH

By jumping four characters and five characters, four characters and five characters, on the basis of the words PAWN and QUEEN, we have spelled out the five-letter Russian word *посох* (= *posoch*: the *ch* is sounded as in *Bach*). *Посох* means 'crook'.

P AWNT O QUEEN S BISH O P3AND CH ECKMATE

The alternation of four-character and five-character gaps constitutes a pretty effective safety blind.

[Here is the whole point of a safety blind. Once you've decoded the message, *you'll find it hard to tell anyone else about it*. Alternating numbers of gap-letters, which are commonly used in cryptical communications, always excite the incredulity of lay persons, be they high or low.]

In the second frame of the cartoon, the King says,

'Better hit the road, young fellow! I know your true identity, and there's many hereabouts that'd be only too glad to erase Finn MacKarpov.'

Aside from its first five words, the second sentence is a needlessly awkward piece of language. To ordinary readers the use of words like 'hereabouts' and 'erase' will appear to be unprobeable. But the words are meant to be probed.

A crudely contrived name ('MacKarpov') pointedly answers the King's own question, 'Are you by any chance a Russian at all?' *Hereabouts* is meant to indicate that a 48-letter anagram starts 'here', on this word (got that?).

Notice that the King says 'identity' rather than 'nationality'. The unprobeable hero who is in danger of erasion has a real name, and the King knows it.

In the sixteenth frame of the cartoon, Finn says to his deer-wife,

'Don't fret, Cervine – I always win!'

Here the safety blind is nothing more than a dash. The rare word *Cervine* (from Latin *cervinus* = 'deer-like') is turned into a name so as to make it begin with a capital letter, and it represents a mark of authorial deliberateness. Anyone who has received a British classical education will stop and look at the word *Cervine*. By contrast, there is more than a chance in a hundred that three consecutive ordinary words beginning respectively with the letters C, I, and A will escape the reader's notice, as for example in the present sentence.

Ordinary short words tend to run past the eye. Let me cite a sentence from the 'Russian invader' article for a second time.

And as it can grow 20 feet in a season, it is hard to miss.

Is that read-it-backward message hard to miss? So is the word *Cervine*. And so is the word EVERYWHERE, when you find it in one missive after another.

This Russian invader is EVERYWHERE

.... Finn MacCool was EVERYWHERE recognised as a superior person.

Are you by any chance a RUSSIAN at all? If you read backward the Russian word *езде* (= everywhere), you'll observe a *д* (= d) sitting beside a *з* (= z).

В Е З Д е = V E Z D e е Д З Е В = e D Z e V

The remaining three letters may be transliterated and arranged so as to give the first three letters of *EVERywhere*. Try explaining that one to your granny. And if you like reading things backward, don't forget to look at 'a s--u--perior person'.

In truth, the vine-person was a rather ordinary man who delighted in honest clean things. Whenever he came across a published cryptogram, he tried to invoke the sternest possible canons of common sense. *Is it likely that cryptographic authors are addressing me personally in oblique oracles? No! Then are there ever times when the real world is characterized by unlikeliness? Yes!* (John Buchan spoke in 1915 about 'these days when the wildest fictions are so much less improbable than the truth.') At such times a bad cartoonist may be induced to play the rôle of compliant gigolo in some complex jigsaw.

A good cartoonist can be whimsical, but he **MUST** be comprehensible. If he wants, he can represent the Irish hero Finn MacCool as a chess-player whom 'murderous competitors' would be 'only too glad to erase'. Here's what he can't do. He can't represent Finn MacCool as having a Russian connection.

Now the Finn MacCool cartoon appeared on 16 December in a famous British journal. Several months before, a less venerable magazine had published an article entitled '**ALEXANDER McDONNELL – ULSTER CHESS HERO**'. [Alexander McDonnell (1798-1835) was the only chess-player of the first rank whom Ireland has ever produced. In modern usage, as we've seen, *Ulster* = 'Northern Ireland'.] The article affected to focus on the McDonnell-Bourdonnais contest of 1834, but it contained what Russians call a 'mighty handful' of references to **DEATH**.

It mentioned a sixteenth-century clan-leader who was **PUT TO DEATH** by McDonnell's forebears.

It described the *EXECUTION* of an eighteenth-century rebel ('one of the most tragic events of the time'), and even alluded to the rebel's *CORPSE*.

It recorded the fact that the Belfast-born McDonnell *DIED a wealthy man*, and that wasn't the end of it.

.....McDonnell was to DIE on 14 September 1835.....

.....Bourdonnais DIED in 1840.....

.....the two rivals are ironically united in DEATH, since both are BURIED in the Kensal Green All Souls' CEMETERY in London.

Five times the word *SACRIFICE* appeared in the text. Notes at the end of the article made further references to the *DEATH* of the sixteenth-century clan-leader, to the *EXECUTION* of the eighteenth-century rebel, and to McDonnell's *GRAVE*. Well, I mean to say, what? All good cheerful chess-related stuff.

There were points at which the author's language became noticeably angular.

.....Belfast, a town rapidly becoming the intellectual as well as commercial capital of Ulster.

The great McDonnell–Bourdonnais contest was an attempt, if unsuccessful, on the part of the still-rising power to wrest world leadership in chess away from France..... [NO, IT WASN'T!]

It is not known at what age, and under what circumstances, he [McDonnell] learnt the moves of the Royal Game.

The third passage is rather verbose. (Why not say merely, 'when and where he learnt to play chess'?) Two conspicuous words -- 'Royal Game' -- might almost have been designed to prepare us for a cartoon in which Finn MacCool

.....played chess against the King of Kerry.

Some editor had helpfully divided the article into six sections, and furnished each section with a heading. While the third section was headed 'McDonnell's Sacrifice', and the fourth section was headed 'The Tragic Sequel', the sixth section was headed 'The Kasparov Connection'. What connection? It is true that in his five-volume work *My Great Predecessors*, Garry Kasparov has written about McDonnell *ALONG WITH MANY OTHER CHAMPIONS*. But McDonnell is no more 'connected' to the Russian Kasparov than he is to the Dutch Jan Timmam, or to the Icelandic Friðrik Ólafsson. Kasparov is brought on, like the King of Kerry in the cartoon, so as to create a slur. The name 'Kasparov' is merely one penny in a threepenny opera.

Are you by any chance a Russian at all?

.....there's many hereabouts that'd be only too glad to erase Finn MacKarpov.

The Kasparov Connection

These pennies are thrown to the crowd by authors who do their serious trade in a subtler coinage. There follow four examples of equidistant spacing which involve respectively gaps of two letters, four words, six letters, and one letter.

McDonnell's Sacrifice (the word *sacrifice* is used five times altogether)

.....a town rapidly becoming the intellectual as well as commercial capital.....

.....attempt, if unsuccessful.....

It is not known at what age, and under what circumstances, he learnt.....

To Russianize ONE Irish chess-player may be regarded as an unfortunate act of folly. To Russianize TWO Irish chess-players looks like deliberate carefulness.

The vine-person found examples of a similar carefulness elsewhere. Some British composer called Michael Berkeley (pronounced 'Barkley') had written an anti-nuclear oratorio called *Or Shall We Die?*, using a libretto by Ian McEwan. The oratorio was recorded soon after its première. Suddenly, FIVE YEARS LATER, the recording was reviewed in a Belfast newspaper under the title *Will we change or shall we die?*

The reviewer wrote an article of twelve paragraphs in which he managed to say *almost nothing about the music*.

In his first two paragraphs he got straight down to business.

Music has always played an important part in the political debate, and many musicians and composers have suffered from statesmen who are wary of hidden messages.

Stalin is perhaps the supreme example of a man who cared considerably about the type of music which was written – as many composers found out to their cost.

(Audaciously explicit, that bit about 'hidden messages'! And the mention of Stalin supplies a RUSSIAN connection.)

In his seventh paragraph the clever boyo managed to tamper with Berkeley's title. After preparing the ground with the earnest clumsiness of a bar-room intellectual, he asked his deadly question ABOUT A MALE INDIVIDUAL.

Man, for the first time in history, has the capability of destroying the world and all life with it. For Berkeley and McEwan this poses the crucial question: does his intelligence have the capability of controlling this power? Can he pass that ultimate test, Or Shall He Die?

The hyphenated word 'crucial' was split between two lines in the original, and the word 'intelligence', like the word 'musicians' in paragraph 1, speaks for itself.

Of the bass soloist, whose Christian name was DAVID, the reviewer said that he

.....represents the isolationist element within each of us which sees everything outside our control as a threat.

'Within each' indicates 'a letter within the word each', the letter A, and so the three words 'each of us' may be seen as concealing the abbreviation *US of A*.

Something similar hides in the first four words of the second 'crucial question'.

Can he pass that ultimate.....

'Isolationist' is a rather inept word to use about a mere individual who sees everything outside his control as a threat. In fact, the word 'i-sol-ati-o-n-ist', which enfolds the word SOLOIST, was addressed as a rebuke to the vine-person. It also managed to take part in a piece of equidistant letter spacing:

.....isolationist element within each of us which.....

The quintessentially miserable last paragraph contained a kind of ‘still want ya’ appeal, in which the initial letters of eighteen words were anagrammed.

Whether you are sympathetic or not the [sic] Berkeley’s message, it is one you should listen to at least.

Some of the clever boyos who addressed the vine-person were able to express their many talents in verse. Thus it fell on a summer’s day that two short poems were printed side by side on the eighteenth page of a local journal.

The one on the right, being dedicated to a minor poet called John Hewitt who had recently died, imparted to the page a delicate obituarian fragrance. It had a thirteen-word title, and ended with what looked like a plain statement.

I have been a Socialist.

Of course the statement was not plain. SOCIALIST, as Lewis Carroll would have said, is ‘like a portmanteau -- there are two meanings packed up into one word.’

If its second letter is allowed to do double duty, the word SO-CIA-LIST will be seen to bespeak a particular kind of SOLOIST. For their part the words ‘I HAVE BEEN’ imply that the imagined speaker will soon BE no more.

The poem on the left appeared to represent an artistic cooperation between Ern Goon and E J Thribb, but it managed to make ‘Kum ba yah’ look like a piece of great literature. It also spoke more plainly than its neighbour. The vine-person’s surname, bereft of its penultimate letter, appeared in the antepenultimate line, while his imminent demise was hinted at in the final line.

*.....crooks
one and all
so long*

Both the word SOLO and the modern abbreviation GN (= ‘good night’) are contained in the phrase ‘so long’. One menacing valediction includes another.

When we examine the phrase ‘one and all’, we discern a cryptogram which is almost gematric in quality. The author is playing with English letters and Roman figures. First, the ‘one’ is a Roman one (I), which must be taken to represent the ninth letter of the English alphabet. Secondly, the word ‘all’ is composed of A plus LL. Since L is the Roman 50, LL must be taken to indicate the Roman 100, which is C.

The words ‘one and all’ are meant to be construed as ‘I and A-plus-C’, viz CIA.

Did the poet have an *ostensible* purpose? Oh, yes! He was at pains to commemorate a greyhound called ‘Darkie’ on which in the past he had laid bets. For some reason he thought fit to record the obscurely beautiful fact that Darkie

*.....came in
at tens.....*

Shortly after the poem appeared in print, some gentleman with a high-timbred voice phoned the vine-person’s home, and asked if ‘Darkie’ was in.

(Jolly decent of the chap to ring, what? I mean to say, it proves that the vine-person isn’t going off his rocker.)

Another person rang. One night the Moscow Radio Symphony Orchestra gave a concert in Belfast. As those who were present on that phenomenal night will remember, some paid employee caused a backstage bell to sound during the performance. Soon afterwards an article entitled 'The Bells, the Bells' appeared in one of the Belfast papers. This article was written under the name of the paper's assiduous music critic. It began with a finely crafted question which even today can make ripples in the peaceful atmosphere of a public library.

Is there a CIA agent at work as a spoiler for the poor Moscow Radio Symphony Orchestra, I wonder?

Behind the light-hearted language there lies a writer who is seriously aggrieved, and far from amused. I shan't take time to dissect his individual words.

Several ungainly sentences appeared later in the article. One piece of the poor reporter's work was guaranteed to arouse merriment, if not mockery.

And now, in concert halls, the unique talking radiator.

That nine-word sentence, which came at the end of a paragraph, appears to be a piece of eccentric and incompetent writing. *How may a unique radiator talk in more than one hall?* 'In truth', as either Poe or Keynes might say, the sentence conceals two separate messages. One of these messages is a desperate yelp of rage which employs only eight letters of the alphabet. (Some of the letters are used more than once.)

TEN paragraphs later we read the following words.

Nice when people pick up one's one liners, isn't it? I observed the same phenomena about a decade ago in this column.....

'About a DECADE ago in this column' meant 'TEN paragraphs ago in this present column'. (It would be more natural to say, 'about ten years ago', but ten years before there had been no such column in the newspaper.)

Furthermore, the observation was made ABOUT, or concerning, a DECADE. The first two consonants of the word DECADE are D and C. What is the author really saying?

'Ten paragraphs back in this column, I made an observation ABOUT someone whose initials are D C.'

Look at the awkward phrase 'one's one liners'. ONE'S and ONE are clumsily juxtaposed, while the necessary hyphen is omitted between 'one' and 'liners'. The effect is to emphasize the 'one', or the initial letter, of each word in whatever one-liner is under discussion. (A similar emphasis is made by the alliteration of 'people pick', 'one's one', and 'isn't it'.)

We seem to have wound up with a ragman, to use the words of a Deacon Blue song. Why does the author bother to write genuinely bad language? In truth, the nine-word one-liner really does rock. It can be construed as a warning hint of the kind that some Queen of the Universe might give to an Iceland troll in a Druilletesque remake of *The Third Degree*. If you came across the one-liner today, you would take it for a piece of computer-translationese.

And now, in concert halls, the unique talking radiator.

How did that sentence ever get past an editor? I'll tell you. The busy editor of a certain newspaper is more concerned with politics than with the arts. His irrepressible music critic is often spoken of as 'a larger than life character'. Any piece of apparent nonsense from the said critic's pen is bound to be wonderful arty nonsense, stuffed with clever literary allusions. Oh well, then. *Imprimatur*.

I forgot to cite the words which precede *Nice when people pick up one's one liners, isn't it?*. Here they are.

.....'there's people dying today that never died before.'

Three articles which hinted at *untimely death* appeared in the same Belfast paper under the same critic's name. I'll quote excerpts from each one of them.

The first article mentioned a little-known clergyman called Charles Wolfe, who was born in 1791, and shared with Finn MacCool the habit of writing verse.

And he wrote quite a lot of poetry, it appears.

Alas, Mr Wolfe, obviously a shy and retiring sort of poet, died young.....

If the words '*and retiring sort of poet*' refer obliquely to ARSOP (= Area Reconnaissance Surveillance Operation), they represent a shot in the dark fired by a poor booby who can't even hit the dark. But I must be maligning the author.

Anyway! The writer of the second article began his antepenultimate paragraph with the trendy word ALAS. He spoke about an actor who had been 'making a big hit' on a TV serial, and alluded to *The Importance of Being Earnest*.

Alas, not for much longer though: Mark is about to be Bunberried, as Oscar Wilde once put it.

Twelve words follow the colon. Their initial letters.....

MARK IS ABOUT TO BE BUNBERRIED, AS OSCAR WILDE ONCE PUT IT.

.....may be arranged to read, I AWAIT BOMB OP (*op* in spy-jargon = 'operation').

That concealed message accords with the final paragraph, which ran as follows.

And what happened to Bunberry when he became inconvenient and had to be got rid of? Why, he was quite literally exploded, of course.

(The phrase '*quite literally exploded*' is reminiscent of '*stand back quickly!*')!

Any half-educated person will want to ask one question. Why does the author set aside Wilde's spelling 'Bunbury'?

The question requires a three-part answer. First, the ten-letter cryptogram 'Bunberried' contains an alternative name of Brer Rabbit (*brer* = 'brother'). Secondly, it implies that the female members of a certain church affect a uniformly austere coiffure. (They don't!) Thirdly, it suggests that one male member of that church is about to die, literally. Look at the middle four letters, then at the first three letters, and finally at the last three letters.

Jolly clever stuff. But if you know *The Importance of Being Earnest*, you'll realize that Wilde did not speak of Bunbury being 'quite LITERALLY exploded'. The devious author is relying on one careful reader to notice a departure from Wilde's original text, and on a multitude of ordinary readers to notice nothing whatever.

Here is the relevant passage from *The Importance of being Earnest*.

LADY BRACKNELL May I ask if it is in this house that your invalid friend Mr Bunbury resides?

ALGERNON *[Stammering.]* Oh! No! Bunbury doesn't live here. Bunbury is somewhere else at present. In fact, Bunbury is dead.

LADY BRACKNELL Dead! When did Mr Bunbury die? His death must have been extremely sudden.

ALGERNON *[Airily.]* Oh! I killed Bunbury this afternoon. I mean poor Bunbury died this afternoon.

LADY BRACKNELL What did he die of?

ALGERNON Bunbury? Oh, he was quite exploded.

LADY BRACKNELL Exploded! Was he the victim of a revolutionary outrage? I was not aware that Mr Bunbury was interested in social legislation. If so, he is well punished for his morbidity.

ALGERNON My dear Aunt Augusta, I mean he was found out! The doctors found out that Bunbury could not live, that is what I mean -- so Bunbury died.

The allusion to Bunbury and the word LITERALLY combine to form a pretty explicit message.

Now let's move on to the third article, which had to do with another dramatist, and included the following seven paragraphs.

Speaking of Dr Faustus, I recall that its author, Christopher Marlowe, was an extraordinary sinister figure.

Indeed, given the popularity of literary historical spy whodunnits, it is surprising someone hasn't done a thriller on Kit Marlowe, for his very life was a spy story in real life.

He was quite a sinister figure: his spymaster, forerunner of John Le Carre's Smiley, was Cecil, Elizabeth I Minister responsible for the Secret Services.

He wrote very few plays (albeit Dr Faustus and the Jew of Malta are legendary) probably because he was often abroad on intelligence work.

Kit came to a sticky end: murdered in a drinking den by the River Thames and there is good reason to believe that his own spymasters may have had him eliminated because he knew too much! Or talked too much! Or maybe planned to write too much!

Could an Elizabethan Spycatcher have been on the cards? I often wonder.

What's new, as they say. Certainly, spymasters were less scrupulous than – or where [sic] they?

The word 'legendary' in the fourth paragraph is a piece of spy-jargon, and refers to Marlowe's 'legend' (= writing plays as a cover for his intelligence work).

A deliberate mistake in the final sentence (the misspelling of the penultimate word as 'where') indicates the presence of a cryptogram. The misplaced definite article in 'Will we change or shall we die?' performed the same function.

Whether you are sympathetic or not the [sic] Berkeley's message, it is one you should listen to at least.

In the present case we are meant to start on the *C* of Certainly, and then to count our way back through the OTHERWISE INEXPLICABLE verbal padding.

Could an Elizabethan Spycatcher have been on the cards? I often wonder.

What's new, as they say. Certainly, spymasters were less scrupulous than – or where they?

After a seven-word gap we hit I. After another seven-word gap we hit an. The three-letter cryptogram employs the initial letters of equidistant words. (*What's* is regarded as a single word.)

You can see a clever bit of equidistant *letter-spacing* in the third paragraph ('.....*Le Carre's Smiley, was Cecil.....*'). Three famous surnames are used in the cryptogram. Cecil's Christian name *William* would have harmed the word-play.

Notice what comes out of the third paragraph when you begin to read at the name 'Cecil'. The phrase '*Elizabeth I Minister*' is a barbarous eyesore.

..... Cecil, Elizabeth I Minister responsible for the Secret Services.

In fact, the capital letters C, E, M, S, and S, taken together with the deliberately unapostrophed I of Elizabeth I, constitute a clear reference to the [then] newly established *CeMiSS* (*Il Centro Militare di Studi Strategici* = 'The Military Centre for Strategic Studies'). By referring to a respectable institution, the author contrives to float another slur. For several years the vine-person was employed partly in connection with the Italian language, but he has never worked for *CeMiSS*.

Tee, hee. Not many people know about *CeMiSS*, even today. Leaving recondite matters to one side, let's move on to consider a question of literary style. Why is AN EXTRAORDINARY SINISTER FIGURE (paragraph 1) watered down to QUITE A SINISTER FIGURE (paragraph 3)? The second expression appears to weaken the first. Are we meant to take special notice of the word SINISTER?

Yes, we are. Whatever a cryptographer tells you TWICE is important.

Think back for a moment to the RUSSIAN INVADER article, in which a certain FENCE was mentioned twice.

First we had 'the fence between the M2 motorway and the railway lines'.

And by the manner it is rampaging along the fence between the M2 motorway and the railway lines, I should reckon that in a matter of a year or two it will have reached the outskirts of Ballymena.

Then we had 'the fence along the railway at the Belfast end of the M2'.

It is far too vigorous for the average small to medium-sized garden. As already implied, it has a tendency to swamp all in its path. It was well-chosen indeed as a cover for the fence along the railway at the Belfast end of the M2.

We've already seen how the words 'well-chosen indeed as' contain an acrostic.

If we look now at the word 'cover', which in spy-jargon is synonymous with the word 'legend', we'll find ourselves wanting to ask: a cover for the WHAT?

For the FENCE ALONG THE RAILWAY. Four words -- FENCE ALONG THE RAILWAY -- constitute a transparent anagram of the sentence LANGLEY WANT CIA FO HERE. (CIA Headquarters is located in Langley, a suburb of McClean in Virginia, and FO is an abbreviation for 'field officer'.)

I'll put it in plain English: 'Langley want a CIA field officer in Northern Ireland.'

About the four-word phrase 'fence along the railway' there is nothing angular or awkward. It is only the double mention of FENCE and RAILWAY that warns us to look for something like an anagram behind the 'cover'.

A similar anagram appeared in one article which I haven't yet mentioned. (Certain messages did seem to come in pairs.) The article was written under the name of a journalist, now deceased, who had once been an intelligence officer. In his first two paragraphs the writer spoke about an unpopular political arrangement which he called the 'Diktat'. Then he digressed, and began to talk about a particular CONCERT. Can you guess who the performers were?

Perhaps last week it was not the only show in town. Pride of place went to the Moscow Radio Symphony orchestra.

What a fine bunch of boyars they are. Strings that would switch from razor-fierce attack to hypnotic caress.

For a couple of hours the Diktat was forgotten.

What a very cultivated kind of journalist, many readers will think. The man is paid to talk about politics, but he can't keep quiet about his interest in music!

Wrong. If the journalist has any real interest in music, he will name at least one of the pieces which the orchestra played last week. He will not be content to describe a single section of the orchestra in a mouthful of school-nerd language.

Five questions pose themselves. Why does the journalist spell the word 'orchestra' with a lower-case letter? Why does he speak of the orchestra as a *bunch*? Does he need a word to alliterate with *boyars*? Is there one important letter in *boyars* which he must camouflage by alliteration? And why does he use the inept word *boyars* (= Russian nobles) when he's talking about musicians?

The jarring lower-case first letter of the word 'orchestra' indicates that a cryptogram begins in that very word. It turns out that the cryptogram is based on TWELVE-letter gaps.

Pride of place went to the Moscow Radio Symphony orchestra.

What a fine bunch of boyars they are.

Another cryptogram is based on FIFTEEN-letter gaps.

Perhaps last week it was not the only show in town. Pride of place.....

In the second sentence of the second paragraph we find a second set of TWELVE-letter gaps, and a trio of thorny infelicities.

Strings that would switch from razor-fierce attack to hypnotic caress.

Past-tense 'would' sounds odd after present-tense 'are'. 'Their strings could' would be much better English than 'Strings that would'. And the expression 'razor-fierce' is ludicrous. You may as well say 'dagger-fierce', or 'pistol-fierce'.

We have here a 59-letter anagram which might have been composed by Edith Sitwell. According to the sender, some redoubtable 'church-goer' attests that a person of swift or Swiftian wit, whom he names respectfully, works for a particular agency. (Sixteen of the fifty-nine letters, AAACHILNNOPRRTTY, represent the person as indulging in a kind of 'I-plot-anarchy' rant. That satirical reference is very obscure, and worthy of learned footnotes.)

Enough! It was nice that the musicians from Moscow got a second mention. Let's go back to Marlowe, and to the double mention of a SINISTER FIGURE.

To speak twice of a 'sinister FIGURE' is to indicate *the number thirteen*.

(The vine-person's Christian name, middle initial and surname employ a total of THIRTEEN letters.)

Furthermore, the eight-letter word SINISTER (like the word MINISTER which is associated with its second appearance) evokes the vine-person's 'extraordinary' middle name, by which he was known at school. If you wanted to encode that 'extraordinary' middle name, you might compose an acrostical sentence of eight words.

Zealots in Nashville never ignore Kristofferson's early recordings.

(Does 'ex-traordinar-y' hint at the letter which follows X and Y? Perhaps.)

The vine-person was named after a Swiss gentleman of notable intelligence who lived and worked in CAIRO. That gentleman published a highly regarded *Manuel de Grammaire Arabe* in 1933. He died from unnatural causes in December 1960, when the vine-person was eight years old. We may construe the French surname *Le Carré* as representing an allusion to the Egyptian capital, since Cairo in French is *Le Caire*. Let me add that the vine-person's father, who was seconded to the RAF Intelligence Corps in 1944, has the same initials as John Le Carré.

He was quite a sinister figure: his spymaster, forerunner of John Le Carre's Smiley.....

For its part the word S-I-N-I-S-T-E-R, as well as evoking the late gentleman's surname, contains the five letters of ERNST (his Christian name).

The first letter of EXTRAORDINARY is also the first letter of ERNST.

Speaking of Dr Faustus, I recall that its author, Christopher Marlowe, was an extraordinary sinister figure.

That's not all. In both sound and appearance the word SINISTER resembles another English word sufficiently to suggest the late gentleman's *nationality*.

SINISTER - SINITSER - SINITZER - SWITZER

(The English word *Switzer* means 'Swiss'.)

Notice that the late gentleman's Christian name and surname contain a total of THIRTEEN letters. As we have seen already, to speak twice of a 'sinister figure' is to indicate the number THIRTEEN.

Thirteen is the sum of three, nine, and one. (Translate the numbers into letters.)

The author has carefully packed the word SINISTER with significant information.

‘Stop there,’ says Colin Tate. ‘You’re imagining things.’ He pauses. ‘Only made-up words can sustain that kind of packing. I mean, look at the mnemonic word *Soh-cah-toa*. It may be packed with information, but it’s not a real word.’

Very good. The Indian chief Soh-cah-toa, a sonic cousin of Shenandoah, reminds us of three trigonometrical facts. (Sine = Opposite over Hypotenuse. Cosine = Adjacent over Hypotenuse. Tangent = Opposite over Adjacent.) And he is utterly irrelevant!

What Colin has said about ‘only made-up words’ is wrong. Any good cryptographer can pack a real word with information. I mean to say, a British agent whose codename is Nancy Grace may write the real word TRAVELLING on a postcard to show that she has completed her business in Tallinn, Riga, and Vilnius, which are respectively the capital cities of Estonia, Latvia, and Lithuania.

Look at the real noun TADZHIKISTAN. Then look at a real adjective.

The word GEMATRIC may arouse no blithe emotion in your breast, but it can help you to remember a number of facts about the Bible.

The Old Testament begins with Genesis, and ends with Malachi.

GE-MA-TRIC

The New Testament begins with Matthew, and ends with Revelation.

GE-MAT-R-IC

The Bible contains sixty-six books, and in 26 English gematria the six ‘contained’ letters E-M-A-T-R-I add up to sixty-six.

G-EMATRI-C [5 + 13 + 1 + 20 + 18 + 9] = 66

The Old Testament contains thirty-nine books, and in 26 English gematria the four consecutive letters E-M-A-T add up to thirty-nine.

G-EMAT-RIC [5 + 13 + 1 + 20] = 39

The New Testament contains twenty-seven books, and in 26 English gematria the two consecutive letters R-I add up to twenty-seven.

GEMAT-RI-C [18 + 9] = 27

Genesis is the FIRST book of the Bible, and Exodus is the SECOND book.

G-E-MATRIC

Romans precedes I Corinthians.

GEMAT-R-IC

Galatians precedes Ephesians.

G-E-MATRIC

Aside from ordinal numbers, FIVE consecutive books of the New Testament begin with the letter T (I Thessalonians, II Thessalonians, I Timothy, II Timothy, and Titus). The FIFTH letter of the word GEMATRIC is T. Have we seen enough?

GEMA-T-RIC

Power hides *within real language*. Thus one pair of underlined words from Lee S Crandall's book *Pets and how to care for them* (New York, 1921) may send a warning message RE AGENT ERASION to a fine officer like GIDEON STEYNE.....

Whether or not this be true, it seems certain that hens with pink eyes (denoting cinnamon blood, with its "sporting" tendencies), carefully yellow-bred for several generations, are more likely to produce clear birds than females of mixed ancestry.

.....who has gone giddily astray. A preacher may be led to give the same kind of warning when he reads Proverbs 29. 1. But let us return to our Marlovian tale. I'll say it again: the author has carefully packed the word SINISTER with significant information. And by sounding the 'sinister' note twice, he hints at a *second* assassination in the John Le Carré manner. It was with exactly the same purpose that he sounded another note twice. Look at his second paragraph.

Indeed, given the popularity of literary historical spy whodunnits, it is surprising someone hasn't done a thriller on Kit Marlowe, for his very life was a spy story in real life.

A 'whodunnit' is usually concerned not with *who stole the tarts*, but with *who killed the cook*. In other words, the deed that is DONE in a 'whoDUNNIt' is nearly always a murder. The author might better have said, '.....it is surprising someone hasn't WRITTEN a thriller on Kit Marlowe', but he has used the word DONE for a purpose. He really means to say, '.....it is surprising someone hasn't MURDERED Kit Marlowe.' (*Thriller* is an evocative word. It rhymes with *killer*.)

A similar purpose is evident in the author's most obvious piece of infelicity. Notice how the word LIFE is used *twice* at the end of the sentence.

.....his very life was a spy story in real life.

One of the subtexts is that a real LIFE is foreseen as having ended (*was*).

Let's move on! If we look at the fifth and sixth paragraphs, we'll find ourselves wanting to ask several questions.

Kit came to a sticky end: murdered in a drinking den by the River Thames and there is good reason to believe that his own spymasters may have had him eliminated because he knew too much! Or talked too much! Or maybe planned to write too much!

Could an Elizabethan Spycatcher have been on the cards? I often wonder.

Why refer to the poet MARLOWE as KIT? Do we refer to the poet SAMUEL TAYLOR COLERIDGE as SAM? It would be no less foolish if we did.

The dramatist starts off as CHRISTOPHER MARLOWE in the first paragraph.

He becomes nice-and-friendly KIT MARLOWE in the second paragraph.

And at the very start of the fifth paragraph, he appears endearingly as KIT.

What is the point of the author's fatuous familiarity?

Does he feel some *particular* kind of affinity with Marlowe?

Or does he require his fifth paragraph to contain a capital K *but no capital M*?

Something else. Why bother to talk about the RIVER Thames in a British newspaper? (A British writer generally speaks of 'the Thames' as an American writer speaks of 'the Mississippi'.)

Why spell 'River' with a capital R in the old-fashioned manner?

And why use the ambiguous phrase ELIZABETHAN SPYCATCHER? (Elizabeth I reigned from 1558 to 1603, while Elizabeth II came to the throne in 1952. For all of my life until the time of writing, I have been a subject of Her Britannic Majesty Queen Elizabeth II.)

Something is going on here. The cryptographic author isn't talking about Christopher Marlowe. He's talking about a 'sinister figure' of the present day.

Ignoring the first letter of 'Thames', which functions as a safety blind, look at the capital letters which appear in four consecutive sentences.

Kit came to a sticky end: murdered in a drinking den by the River Thames and there is good reason to believe that his own spymasters may have had him eliminated because he knew too much! Qr talked too much! Qr maybe planned to write too much!

Could an Elizabethan Spycatcher have been on the cards?

See if you can rearrange the underlined capital letters K, R, Q, Q, C, E, and S.

Do you detect the civet-coffee flavour of the cryptographer's mind?

You must be tired of overloaded English. Let's go out to the garden.

Most of the SUBTEXTS which we have discerned are fairly well concealed.

By contrast, the TEXTS themselves are clear. They all play a tune that sounds rather like 'Death and the Maiden', minus the Maiden.

..... give it room and stand back quickly!

.....as it can grow 20 feet in a season, it is hard to miss.

On the run from murderous competitors.....

Better hit the road, young fellow! I know your true identity, and there's many hereabouts that'd be only too glad to erase Finn MacKarpov.

McDonnell was to die on 14 September 1835.....

Bourdonnais died in 1840.....

.....the two rivals are ironically united in death.....

Will we change or shall we die?

Can he pass that ultimate test, Or Shall He Die?

**.....crooks
one and all
so long**

.....there's people dying today that never died before.

Alas, Mr Wolfe, obviously a shy and retiring sort of poet, died young.....

Alas, not for much longer though: Mark is about to be Bunberried, as Oscar Wilde once put it.

And what happened to Bunberry when he became inconvenient and had to be got rid of? Why, he was quite literally exploded, of course.

Kit came to a sticky end: murdered in a drinking den by the River Thames and there is good reason to believe that his own spymasters may have had him eliminated because he knew too much! Or talked too much! Or maybe planned to write too much!

Nearly there! We've glanced briefly at a number of publications which contain an ENORMOUS hoard of cryptography. I've explicated here only a small part of the hoard, but I'm yawning helplessly as I write these words, and I want to stop. Let me be concise. For a number of years, in consort with the orchestra of published cryptograms, all kinds of filmic shenanigans were enacted. Life became quite disordered for the vine-person. In fact, it became a travelling theatre of the absurd. (Baron Münchhausen was calling the shots -- even in the methane swamps of academe! Every area of life has its team of compliant gigolos, and more than one sodality has its own grapevine. To speak in terms of old British television, it was as if Bonehead and Mr Pastry were working for The Voice.)

ROLL OVER AND MAKE ROOM FOR ME, MR EDITOR

Within a short period, some of the vine-person's publications were aspersed in specially commissioned journal articles. Each one of these articles left the vine-person feeling as if he had been handbagged by a half-witted pantomime dame. One example will suffice. A mathematician whom we shall call Anon made up a definition of figurate numbers, clothed it in quotation marks, *falsely accused the vine-person of having created this definition*, and then took him to task for doing so. Although his own graphics looked like the idiot children of a computer virus, Anon dared to complain that the vine-person had shown a want of aesthetic sense in representing pentagonal numbers as squares surmounted by triangles (rather than as regular pentagons filled out with inexplicable pockets of air). The rancorous Anon and his fellow-gigolos had nothing whatever to say. They disgraced themselves. So did every editor who made room for their pathetic fallacies.

I'm going to repeat John Buchan's words. There are times 'when the wildest fictions are so much less improbable than the truth.' It may be a mere fiction that that Münchhausen once came upon

.....Rousseau, with a chalice of sweet poison in his hand.....

But it is true that Münchhausen's creator, Rudolf Erich Raspe, died and was buried in Ireland.

Yegor Gaidar (1956-2009), once prime minister of Russia, declared that he himself was poisoned in Ireland on 24 November 2006. (Aleksandr Litvinenko, a former KGB officer, died in London from polonium poisoning on the same day.)

In his play *Mozart and Salieri*, Pushkin makes Mozart ask,

.....Ах, правда ли, Сальери,
Что Бомарше кого-то отравил?

.....*Hey, is it true, Salieri,
That Beaumarchais once poisoned someone?*

There are questions that cannot be answered with certainty. Did Beaumarchais really poison either or both of his first two wives? Did Salieri really poison Mozart? Was Yegor Gaidar really poisoned in Ireland? I don't know. But it is true that when the vine-person was still in his thirties, he lived through an experimental play which suggested not so much Pushkin or Beaumarchais as a combination of Borges and Borgia. The subtle playwright may well have been inspired by a magnificent sentence of Dylan Thomas.

Alone in the hissing laboratory of his wishes, Mr Pugh minces among bad vats and jeroboams, tiptoes through spinneys of murdering herbs, agony dancing in his crucibles, and mixes especially for Mrs Pugh a venomous porridge unknown to toxicologists which will scald and viper through her until her ears fall off like figs, her toes grow big and black as balloons, and steam comes screaming out of her navel.

He was kind enough to warn his audience. As a prelude to the play he wrote a second piece of horticultural journalism, and packed it with intimidating cryptograms. (*No harmful residues* may denote 'unknown to toxicologists'.)

As far as my garden is concerned, the leaf-hopper is well in the running for the garden pest of the year award. Unlike the slothful greenfly which crawls over your plants in large numbers, the delicately coloured leaf-hopper is a jolly active kind of a soul.....

An insecticidal spray containing pirimicarb, or malathion, or dimethoate or permethrin should be used as soon as the insects appear.

I see the Phostrogen people are now offering alternative pesticides to the synthetic chemical materials. These are made from natural organic plant and animal sources and are sold under the name of Safer's Natural Organic Insecticides and Fungicides. It is good to know that it is claimed that there are no harmful residues.

Perhaps because of its focus on 'audience participation', the experimental play occupied the attention of its one-man audience for a protracted period.

Anyway! In his own way, the vine-person was a bit of an entomologist. (Years before, he had conducted the première of Eibhlis Farrell's choral ode *Lice*.) What does a Big Bad Boy do when he is branded as a 'garden pest' by a mighty handful of militant insect-killers? I'll tell you. He reads I Samuel 21. 13, and puts his trust in God. Then he declaims one line of a famous Xhosa wedding-song.

Igqira lendlela nguqongqothwane

(= The diviner of the roadways is the knock-knock beetle).

In many forms of combat it is wise for a man not to acknowledge the strength of his opponents. The vine-person was obliged to live by faith, and at times by inscrutable caprice. To a number of helplessly communicative persons he wrote sportive epistles which dimly resembled Lord Nelson's letters to Lady Hamilton.

More than once he did what David did before Achish, and 'changed his behaviour', acting in accordance with *The Thirty-Six Stratagems* 5. 3:

假痴不癡 (= Hide behind the mask of a madman).

For as long as the game lasted, the vine-person kept his own counsel. A very few of those who were closest to him had a faint awareness that something untoward was going on. Only he himself knew *what* was going on.

The prophet Daniel perceived historical forces in chemical *Sturm-und-Drang* terms. When gases act upon liquid, enormous living solidities are born. (The passage which follows is written in Aramaic, not in Hebrew).

חזה הוית בחזוי עם ליליא וארו
ארבע רוחי שמיא מגיחן לימא רבא
(= I saw in my vision by night, and, behold, the four
winds of the heaven strove upon the great sea).

וארבע חיון רברבן סלקן מן ימא שנין דא מן דא
(= And four great beasts came up from the sea, diverse one from another).

The Russian poet Aleksandr Blok spoke prophetically about historical forces in terms of мировой оркестр (= the world orchestra). Here are four lines from 'На поле Куликовом' (= 'On Kulikovo Field').

Река раскинулась. Течет, грустит лениво
И моет берега.....
The river spreads itself out. It flows in idle sorrow,
And washes the banks.....
Покоя нет! Степная кобылица
Несется вскачь!
No peace! The mare of the steppe
Flies along at full gallop!

The musician and poet Deborah explained earthly events in terms of parallel celestial events.

נחל קישון גרפם נחל קדומים נחל קישון
The river of Kishon swept them away, that ancient river, the river Kishon.....
אז הלמו עקבי סוס מדהרות דהרות אביריו
Then were the horsehoofs broken by the means of the pransings, the pransings
of their mighty ones.

The Chinese poet Cen Can combined horse and river in one line of verse.

君不見走馬川行雪海邊

Master, do you not see? Running Horse River is making its way to the snow-sea's margin!

All four writers help us to understand something about the terrifying crucible in which the tides of historical events are generated.

Of course the metronome of a musician is of no more use to a historian than the sextant of a mariner. Vergil would have called the world orchestra *mutabile* (= changeable). Verdi would have called it *mobile* (= fickle). Nevertheless, Blok's мировой оркестр may often be described in musical language. Many of my readers are familiar with the ballet in which *Danse Russe Trépak* gives place to another kind of dance. Certain fires have burned for a lifetime, and died. Other fires are taking their place. Pale Kings of the Sunset, beware!

Oh, dear. Colin Tate is grunting impatiently, so let me resume my tale. In time the Cold War passed into history. So to a great extent, and not by coincidence, did the modern Irish troubles. Certain persons began to immerse themselves in other-worldly pursuits. For his part the completely trivial vine-person devoted himself to the study of the Bible.

I may say no more here; in fact, I may already have revealed too much.

Tee, hee! For years I've been wanting to come out with those magniloquent words of Samuel Liddell MacGregor Mathers.

Is one earnest scholar looking at the first letters of the fifteen words, and turning them into a trisyllabic message from an agent called 'Smith'? Then please regard that scholar as an example of how not to behave. If you yourself are excessively earnest, and if your field of vision is excessively narrow, YOU WILL NEVER BE ANY USE AT CRYPTANALYSIS. I must give you that warning now, because the chapters which follow are largely concerned with secret writing.

[Many readers who would never call themselves scholars are cantering through my book without any trouble. Having fed voraciously on good fiction since their childhood, these readers are prepared to pursue an author wherever he goes, even when he travels over rough country. If I speak light-heartedly, they smile and move on. If I quote some piece of literature in a language that they don't know, they read the translation, and move on. If I say, *See II Timothy 4. 10*, they look up the verse, and move on. If I set an exercise, they do it, and move on. If I talk about one thing and then go on to talk about another thing, they follow me intrepidly. Let me salute them for being what Nabokov calls 'excellent readers'. It's funny. The people who find my book really hard to read are earnest self-important scholars. If I speak light-heartedly, they are outraged. If I quote some piece of literature in a language that they don't know, the boobies accuse me of ostentation. If I say, *See Philemon 24*, they are far too busy to look up the verse. If I set an exercise, they are far too clever to do it. If I talk about one thing and then go on to talk about another thing, they rebuke me like village idiots for confusing them. Being unable to read the book fluently, they hoke and poke at odd pages, looking for things to complain about. Some of them are energized as readers not by a desire to find out what is true, but by a dislike of the writer who ignores their Milkybar-Kid notions of propriety.]

Let's move on! Any good cryptographer will resemble the person whom Thomas Ford brilliantly describes in six words:

Cupid is wingèd, and doth range.....

More than one notable cryptographer has been a world-class poet.

***The name of Frances Sargent Osgood is concealed
in a famous acrostical poem by Edgar Allan Poe.***

For her these lines are penned, whose luminous eyes,
BRightly expressive as the twins of Leda,
ShAll find her own sweet name that, nestling, lies
UpoN this page, enwrapped from every reader.
SearCh narrowly this rhyme, which holds a treasure
DivinE -- a talisman -- an amulet
That muSt be worn at heart. Search well the measure;
The wordS -- the letters themselves. Do not forget
The triviAlest point, or you may lose your labor.
And yet theRe is in this no Gordian knot
Which one miGht not undo without a sabre,
If one could mErely understand the plot.
Enwritten upoN this page whereon are peering
Such eager eyes, There lies, I say, *perdu*,
A well-known name, Oft uttered in the hearing
Of poets, by poets; aS the name is a poet's, too.
Its letters, althouGh naturally lying --
Like the knight PintO (Mendez Ferdinando) --
Still form a synonym fOr truth. Cease trying!
You will not read the riDdle though you do the best you *can* do.

Those who excel in the cryptographic world do their work with a merry heart. They think fast. They laugh easily. They range widely. They ignore conventional linguistic boundaries. They stretch words. They even go where dragons be.

By contrast, scholars who inhabit the world of accepted wisdom are inclined to think slowly. They smile gravely. They cultivate a walled garden. They revere conventional linguistic boundaries. They are addicted to safety. They are actually *afraid* to find out things on their own. They feel compelled to see only what other people have seen. At their worst, they stretch a tight-rope between two received ideas, and then for four dull decades they make their fearful, forelock-touching, footnote-writing way along it. The dangerously carpeted floor looms a whole five inches beneath their feet. From such persons I flee aghast.

The name of Julija Primic is concealed as dative Primicovi Julji in a famous acrostical sonnet by the Slovene poet France Prešeren. On the right I quote the valiant English translation of Vivian de Sola Pinto (no relation of 'the knight Pinto' in Poe's poem!).

Poet tvoj nov Slovincam venec vije,
Ran mojih bo spomin in tvoje hvale,
Iz srca svoje so kalí pognale
Mokrócvetéče rož'ce poezije.
Iz krajov niso, ki v njih sonce sije;
Cel čas so blagih sapic pogrešvále,
Obdajale so utrjene jih skale,
Viharjov jeznih mrzle domačije.
Izdíhljeji, solzé so jih redile,
Jim moč so dale rasti neveselo,
Ur temnih so zatirale jih sile.
Lej! torej je bledó njih cvetje velo,
Jim iz oči tí pošlji žarke mile,
In gnale bodo nov cvet bolj veselo.

A Slovene wreath your poet has entwined;
A record of my pain and of your praise,
Since from my heart's deep roots have sprung these lays,
These tear-stained flowers of a poet's mind.
They come from where no man can sunshine find,
Unblest by soothing winds of warmer days;
Above them savage peaks the mountains raise,
Where tempests roar and nature is unkind.
They were all fed on many a plaint and tear;
Frail growth these blossoms had, so sad and few,
As over them malignant storm-clouds flew.
Behold how weak and faded they appear!
Send but your rays their glory to renew --
Fresh flowers will spread fragrance far and near.

DON'T LET OTHER PEOPLE TELL YOU WHAT TO THINK

Some pieces of language have great formative power. As a child I came upon an Italian proverb in *The Count of Monte Cristo*.

Che a compagno a padrone (= Whoever has a companion has a master).

In the scholarly world as elsewhere, paid employees are often bemused by a free agent who chooses to work for himself. Whenever I speak at an academic conference, people ask me, 'What is thine affiliation? and whence comest thou?' I'm always glad to tell them where I come from.

Here are four precepts for my Christian readers. First, look for your true affiliation in Romans 8. 16. Secondly, pray that the LORD will deliver you from conceit. Thirdly, read verses 98, 99, and 100 of Psalm 119 in a spirit of reverent gratitude. Fourthly, remember the message of Isaiah 40. 31. A sufficiently literate Christian who believes that the Bible is the inspired Word of God will be able to regard the academic world with the eye of an eagle – FROM ABOVE.

'Such arrogance,' mutters Colin Tate. Ha, ha, ha! I have met several scholars who are truly arrogant. They know nothing about literature, and they write the most execrable English. These scholars will regard my book 'from above' when they come to judge it.

Wizened vampires who feed on received ideas have neither the imagination nor the courage to ask unauthorized questions. But if you want to find out things, you will be prepared to ask certain questions. Like, *What is the speed of darkness in Nahum 1. 8? Or, Are undertones the anti-elements of music?*

A SCHOLAR'S MIND MUST BE EXUBERANTLY FERTILE

Both Mr Endeavour and Dr Cadaver swim fifty lengths of the club pool every morning. Thunderous organ music by Louis Marchand sounds in the mind of Mr Endeavour so as to generate a kaleidoscopic stream of brightly coloured thoughts. (ISAIAH 25. 11. MESEMBRYANTHEMUMS. HORSE-RIDING IN ICELAND. TAMARA ROJO DANCING IN TOKYO. JEREMIAH 31. 13. AMBER CHESSMEN. WINTER IN ST PETERSBURG. THE GOUR EMIR MAUSOLEUM IN SAMARKAND. REVELATION 4. 3. SCARLET AND HYACINTH MACAWS. SUMMER IN GREENLAND. LERYN FRANCO THROWING THE JAVELIN IN ASUNCIÓN. JUDGES 9. 53. A CHINESE CLOISONNÉ CLOCK. BEAVERS IN CANADA. THE BLUE MOUNTAINS IN NEW SOUTH WALES. EZEKIEL 47. 5.) For his part earnest Dr Cadaver, who regards Mr Endeavour as 'irresponsible', is content to think the same mildewed thought in rhythmical parallel with his every stroke. (GENRE. GENRE. GENRE. GENRE. GENRE. GENRE. GENRE. GENRE.)

Mr Endeavour is a writer. Dr Cadaver believes himself to be a literary critic.

Timorous scholars of ancient literature approach their texts in a curious fashion. Whenever they come upon cryptical passages relating to mathematics, music, or technology, they refuse to engage in the study that would make those passages comprehensible. More than one author will tell you the same kind of tale. Here is Ernest McClain talking about Francis Cornford (*The Pythagorean Plato*, 2).

In 1945, in his translation of the Republic, Cornford not only omitted "the extremely obscure description" of Socrates' "sovereign number", but he also allowed himself to "simplify the text" of the tyrant's allegory.

Here is Reginald Engelbach (*The Problem of the Obelisks* [London, 1923], 22).

While the publication of a new grammatical form or historical point will evoke a perfect frenzy of contradiction in the little world of Egyptology, the most absurd statements on a mechanical problem will be left unquestioned, and, what is worse, accepted.

Many Biblical scholars flee from genuine technicalities in the text, and create a technical lexicon of their own. They saturate their speech with terms like 'post-exilic', 'cultic practice', 'synoptic', and 'kerugma'. While ignoring the two musical instruments which Job played, and the reed-box of Judas Iscariot, and the many other REAL OBJECTS that the Bible contains, they live in the narrowly religious netherworld of *Gattung*, *Heilsgeschichte* and *Sitz im Leben* where, as Heine might have said, *Die Luft ist schwül, und es gunkelt*.

Refuse to incarcerate yourself. Range widely in the open air. Do as many real things as you can. Listen. In my youth I earned some money by working on a herring-boat. The fact that I did so makes me a better reader of St John's observation *εν εκεινηι τη νυκτι επιισαν ουδεν* (= that night they caught nothing) than some pallid commentator who does all his research in a study. Listen again. In my youth I used to bring a herd of cows from their meadow to the milking-parlour and back along a busy main road. The fact that I did so makes me a better reader of Vergil's phrase *mugitusque boum* (= and the lowing of cattle) than some soft-handed anchorite who does all his learning in a library.

When *you* make use of the library, as you must do, set yourself to range widely. Do you take the trouble to observe things in the literature of Russia, Iceland, and China? Then you're more likely to observe things in the literature of Israel.

Of course you don't see everything as being connected to everything else. Thus you hear Sobakevich say in Part I, chapter 7 of Gogol's *Dead Souls*,

.....пятый десяток живу, ни разу не был болен.....

(= I've lived for fifty years, and I've never been sick once).

And in *Kristni Saga* you read about Ísleifr Gizurarson, the first bishop of Iceland.

Pá var hann fimmtugr at aldri, er hann var til byskups vígðr

(= He was fifty years old when he was ordained as bishop).

You would never suggest that these two passages were connected. But look at the first two lines of 錦瑟 (= The inlaid harp) by Li Shangyin.

錦 瑟 無 端 五 十 絃

(= The inlaid harp has an eternal fifty strings):

一 絃 一 柱 思 華 年

(= Every string with its own peg stands for a wonderful year).

Then look at the following excerpt from Leviticus 25. 9-10.

ביום הכפרים תעבירו שופר בכל-ארצכם:

(= in the day of atonement shall ye make the trumpet sound throughout all your land).

וקדשתם את שנת החמשים שנה

(= And ye shall hallow the fiftieth year.....).

In each of *these* passages you find FIFTY YEARS associated with MUSIC. There may be a seven-octave connection here which you can study with profit.

The more widely you range in world literature, the more open your eyes will be to the tricks that writers play.

A good exercise for any apprentice cryptanalyst is to rewrite a piece of literature in the manner of six different authors. Let me show you what I mean.

Here is Horace, *Odes* I. 38.

*Persicos odi, puer, apparatus;
displicent nexae philyra coronae:
mitte sectari, rosa quo locorum
sera moretur.*

*simplici myrto nihil allabores,
sedulus curo: neque te ministrum
dedecet myrtus, neque me sub arta
vite bibentem.*

(= I hate Persian extravagance, lad, and I dislike garlands bound with lime-bark. Don't go hunting to find where a late rose is lingering. Heed me, and don't trouble to make anything more elaborate than garlands of simple myrtle: myrtle suits both you as you serve the wine, and me as I drink it, under the leafy vine.)

Edward Fitzgerald might have rendered the ode as follows.

*I hate the Sultan's Pomp, thou peevish Boy,
And Crowns of Hyacinth my Head annoy.
Ah, come with old Khayyam, nor think the Rose
That blows by River Brink will bring thee Joy.*

*With honest Green of Myrtle be content:
Accept the simpler Wreath as ornament.
So Myrtle-crown'd, beneath the leafy Vine
Thou'lt serve, I'll drink, till all TODAY be spent.*

H W Longfellow might have rendered it thus:

*Ugh! I cannot love Dacotahs,
Cannot love their paint and plumage,
Cannot love their richest raiment,
Robes of fur, and belts of wampum.
Wahonowin! Now the Autumn
Changes long green leaves to yellow
On the shores of Gitche Gumee.
Bind no more the prairie lilies,
Bind them not with cords of elm-bark;
Seek no more the sweet Shabomin,
Nor the strawberry, Odahmin,
Nor Wabenowusk, the yarrow,*

*Nor the Nahmawusk, the spearmint,
Round the borders of the cornfield.
Make a simple lodge of branches,
And a leafy swing of grape-vines:
Give me food in humble vessels,
Give me drink in bowls of basswood,
Then our time shall be more joyful
In the land of handsome women!*

A Scottish 'kailyaird' poet might have rendered the ode as follows:

*Awa wi aa yer silken cleadin!
Lassie, ar ye weirin breeks?
Och, dinnae scour the feedles greedin
Jeelyfloors amang the leeks.*

*Nae malt an male cud be sae doose
As aiten breed an nettle-bree;
Oor heather-theekit Heelan hoose
Is gude eneuch for ye an me.*

It is likely that e. e. cummings would have rendered it thus:

*look son i couldn't give a rap
for european arties*

*i think your blooming verse is crap
i hate your limey parties*

*youse boys can worry whether you're
picassoist or sartrist*

*gimme a feed of whiskey pure
and i'm a kind of artist*

A modern-day Edith Sitwell, nourished on W S Gilbert, might annoy many people of intelligence by composing a torrent of faintly Horatian nonsense, as follows:

When

Q.

H. Flaccus worshipped Bacchus on the Sabine mead

Where Faunic feet incede,

*Jesting Shah, the theme of the Raj, and the dream of the Taj Machree,
Plantagenetized the Pelagian skies with a budgerigar and a bee:
Doctor Sacheverell sat in Dunfermline, drinking his curds and whey,
But he later revealed that Cruella De Vil was a daughter of Kitty O'Shea.*

*Becky Alister fled from Iranian clamour --
Lise was displeased with the Colas and lime,*

*For the sailor who came
Was lame by name,
And as calm as Odile! ('Either Sam or Lucile
Can reveal that I kissed her,' said Mister de Lisle.)*

*The musketeers of Moscow
Adored their new Czarina;
Khovansky ordered Fosco
To play his concertina.
The Garridebs were guarding
Sir Arthur Conan Doyle
When Vaughn De Leath got out of bed
And sang 'Banana Oil'.*

*Myrtle will glimmer in glamorous mittens
Permitting the swimmer to live on a pittance
Or give a recital and settle a grievance
With Venus de Milo and W. Stevens!
They scallop her tray in the sky and portrayal
As queen of the piste where a scuddering soloist
Planted a Toad Hall rhodomontade called I Plot Anarchy,
By way of informing the ones who invisibly reign
About greengage jam that would tempt a granite jar.*

*The undragonish Jane is Pythagoras-plain when
A vine in Vienna can whine like a tenor
And rosily dawn as Odette on a pane
To enact (in her cuspidal Fledermaus mask,
And Endymion's pair of vermilion scarves)
The musical rôle of Entellus Ketèlbey
With caravan-camels, the Caliph, and Cobley,
Plus cabaret-dancers like Kepler and Keibler
Whose pithy optimeter Pythian Demeter greets with a cheer:*

*'Archregent here!' So watch your step:
Laconic Laocoön smokes at a hookah,
And cannily cloaks the Tirana Piranha,
Inducing a safer Fiducial Chafers
To dance with Purcell and his shivering quavers --*

*To quote an unclerical quail, or enquire like a steric Astaire
For crumbs of Lucretius adverting to Paradise Lost.*

*Well, a ptarmigan-chirp is his Parthican purpose
When W. Earp and the Doc and Euterpe
Unlock or interpret what Fireclad Fuchsia sang
On the seventeenth day of October,
Nineteen hundred and ninety-three:
'Mr Dynamite climbs over Dolomite-primes:
Mrs Grundy rhymes with the Sunday Times,
And I am the Shulamite there.'*

A Norse poet, acting under the influence of *Beowulf*, is likely to have used less words than Edith Sitwell.

| | |
|-----------------------------|-----------------------------------|
| <i>for men of might</i> | <i>mead-drink is goodly;</i> |
| <i>bloom-bearing blades</i> | <i>are blunt in lind-play.</i> |
| <i>not Scyld Scefing</i> | <i>was shamed of his helmet:</i> |
| <i>trolls will trample</i> | <i>the trappings of east-men.</i> |

Take a short break before you look at Pindar, *Olympian Odes XI*.

ἔστιν ἀνθρώποις ἀνέμων ὅτε πλείστα
χρήσις, ἔστιν δ' οὐρανίων ὑδάτων,
ὀμβρίων παίδων νεφέλας.
εἰ δὲ σὺν πόνῳ τις εὖ πράσσοι, μελιγάρυες ὕμνοι
ὑστέρων ἀρχὰ λόγων
τέλλεται καὶ πιστὸν ὄρκιον μεγάλας ἀρεταῖς.
ἀφθόνητος δ' αἶνος Ὀλυμπιονίκαις
οὗτος ἄγκειται. τὰ μὲν ἀμετέρα
γλῶσσα ποιμαίνειν ἐθέλει·
ἐκ θεοῦ δ' ἀνὴρ σοφαῖς ἀνθεῖ πραπίδεσσιν ὁμοίως.
ἴσθι νῦν, Ἀρχεστράτου
παῖ, τεᾶς, Ἀγησίδαμε, πυγμαχίας ἔνεκεν
κόσμον ἐπὶ στεφάνῳ χρυσέας ἐλαίας
ἀδυμελῆ κελαδήσω,
Ζεφυρίων, Λοκρῶν γενεὰν ἀλέγων.
ἔνθα συγκωμάξαι· ἐγγυάσομαι
ὑμῖν, ὦ Μοῖσαι, φυγόξενον στρατὸν
μηδ' ἀπείρατον καλῶν,
ἀκρόσοφον δὲ καὶ αἰχματὰν ἀφίξεσθαι. τὸ γὰρ
ἐμφυῆς οὐτ' αἶθων ἀλώπηξ
οὐτ' ἐρίβρομοι λέοντες διαλλάξαντο ἦθος.

Either P. Coleridge or a Victorian schoolboy might have rendered the ode as follows:

*At times we need a wind; at times a shower
Of water, born of cloud, from heaven's vault;
But once success attends a struggle, then
We owe the winner notes of honeyed voice,
Be they no more than prelude meant for words
To come -- a simple pledge, confirmed by oath,
Designed to mark a feat of signal worth.
The crowned Olympic heroes take as prize
An ample store of lofty fame, from which
My shepherd tongue would keep a part in fold;
But only through the help of God is art
Preserved to bloom within the soul for e'er.
Agesidamus, son of Arcestrate,
To praise thy boxing let me duly set
A wondrous ode upon thy golden wreath
Of olive; let me also hail the sons*

*Of Locris, those who colonize the west.
Ye Muses there should join the vict'ry-song:
I give my word, I call you not to folk
Who banish guests, and not to men untaught
In noble things -- they shine in all the arts,
And bear the spear with pride. No tawny fox
Or roaring lion goes against his grain.*

The great English classicist A E Housman wrote verse, as Nabokov said, 'about young males and death'. Housman might have rendered Pindar's ode thus:

*'Let us hear the singer
Chant a dancing strain,
Not the cold wind blowing,
Not the falling rain.*

*'Let the rain assail us
Once we've turned to clay:
Now's the day of gladness,
Now's the victor's day.'*

*Handsome-faced and hearty,
And fair in ev'ry limb,
The young Agesidamus
Inspired our merry hymn.*

*We cheered to see him conquer,
And win the olive-crown;
The son of Arcestratus
Achieved a brief renown.*

*We praised his kinsmen also,
Strong in limb and mind;
The lovely lads of Locris
Were noble, true, and kind.*

*Alas, Agesidamus!
His age in sum was short;
The plague destroyed his dancing,
The plague within his heart.*

*And all the boys beside him
Endure a dead refrain:
Only the cold wind blowing,
Only the falling rain.*

Aleksandr Pushkin might have rendered the ode in a single Onegin stanza, more or less as follows:

*Wind is a boon from time to time,
And cloud's a useful thing as well,
But stop! -- the reader thinks my rhyme*

*Relates the death of Аннабел.
Now that you've won the boxing-match,
You've earned a sweet prelusive snatch
Of songs to come -- a monostich,
Belovè Arcestratovich,
Composed with heaven's own support,
In which I join the bards who laud
Athletic stars. I must applaud
Your countrymen, superb at sport,
And kind to guests, but fierce in war --
What decent folk the Locrians are!*

Robert Browning would have rendered the ode thus:

*Let the chubby-cheeked cherubs who blow
From the corners of mariners' charts
Hear Aeolus pronouncing his threat: 'Quos ego....!',
And depart with their nebulous pluvial arts
To engobble the Ghibelline foe.*

*For a lyrical Eagle of Thebes,
Whose Corinna can play ocarina,
Is filling our villages, hamlets, and glebes
With a Locrian mode that has led Palestrina
To write in the style of Delibes.*

*Even Queensbury's voice in the bass
(Here's a musical rôle for the marquess!)
Is praising the rather colonial race
Of residers in Epizephyrian Locris --
Has anyone heard of the place?*

William Carlos Williams might have rendered Pindar's ode as follows:

*Hear! the cold, familiar wind,
glazed with last night's rain!
Ah, yes -- the wind tempered
by a unison, a certainty of music.*

*Compose. Agh! what
sort of man was Agesidamus --
your grandson, yes? He won?
We'd better acknowledge it and
buy him a bunch of marigolds.*

*Listen! Do you not hear
them? the Muses, piping
upon the sacred shore?*

*Which shore?
Agh, Locris, maybe,*

*where folk are sharp to strike
and give you sweet plums for breakfast.*

*Let Maria Fox wait
(not knowing what she does)
for the white*

*chickens --
we can't shift it or change it.*

Wang Chih Huan would have rendered the ode in one hundred characters, thus:

| | | | | | |
|---|---|---|---|---|---|
| £ | V | O | R | £ | |
| L | £ | N | A | M | |
| O | R | R | Z | P | |
| J | J | J | £ | Y | P |
| N | J | P | D | R | J |
| J | N | £ | B | £ | N |
| N | G | S | O | A | D |
| G | R | J | Y | N | A |
| S | J | O | D | M | R |
| J | V | L | U | J | |
| R | £ | J | £ | J | |
| £ | R | V | O | J | |
| A | H | £ | D | £ | W |
| M | A | H | £ | M | T |
| S | J | £ | £ | P | H |
| H | L | R | M | O | |
| A | B | O | B | W | |
| L | A | N | L | £ | |
| O | J | A | A | R | |
| M | R | D | Z | T | |

Any man who disciplines himself to write in the styles of nine or ten good writers will do three things. First, he will engage with good writers in the most intimate possible manner. Secondly, he will enhance the quality of his own style. Thirdly, he will learn that it is possible for an author to write in more than one style.

The more widely you range in world literature, the more open your eyes will be to the tricks that writers play.

Discoveries are often made by rebels who ignore the lodge rules. One day you may begin a journey of discovery by laughing at such a bizarre notion as your solemn colleagues would refuse to contemplate. Whatever you do, take neither yourself nor the academic world too seriously. Be prepared to live like the healthy-minded Dutch writer, Jacqueline Elisabeth van der Waals.

*Over de vrolijke heuvels
Loop ik alleen, alleen!*

Over the merry hills
I run alone, alone!

Listen to the Ukrainian poet Ivan Yakovych Franko.

Против хвиль плисти

(= Swim against the waves).

Be wingèd, and range widely. Bear in mind a great dictum of G K Chesterton.

Moderate strength is shown in violence, supreme strength is shown in levity.

Caprice is a grand thing. The poor pawns who believe themselves to be major pieces are afraid of caprice. Remember what H G Wells wrote about Mr Polly.

He sent this letter to Gilhampton for no other reason in the world than that he liked the name of Gilhampton.....

We shall now fly to the close, accompanied by a wide range of authorial birds.

At the time of writing the vine-person is a franklin still unskewered, as one great novelist might say. (Sorry, I mean alive and flourishing.) Listen to Nietzsche.

Was mich nicht umbringt, macht mich stärker.

(= What does not destroy me makes me stronger.)

In Psalm 7 David wrote about a real enemy whom he codenamed 'Cush':

יָשׁוּב עִמְלוֹ בְּרֹאשׁוֹ (= His mischief shall return upon his own head).

The author of Psalm 7 was a solo cryptographer who worked *in the field*. We'll learn in a later chapter how David turned his enemy's codename into a cryptogram, and made it serve as the musical basis of a psalm. It has been in accordance with David's example that I have taken some facts from my own past, and made them serve as the basis of a lesson in cryptanalysis. If those facts had not suited my didactic purpose, I should never have wearied my readers by revealing them.

Remember that the present chapter was born of two questions.

Rosie Stone said, 'I know NOTHING about cryptanalysis. Can the author give me a brief introduction to the subject?'

Lettuce Boy said, 'I'm not sure. Is the author *qualified* to give you such an introduction?'

See how far we have advanced!

Rosie and Delia have worked their way diligently through a most laborious chapter. Neither of them has lain, like Victor Hugo's Sara,

*Dans un hamac, au-dessus
Du bassin d'une fontaine.....*

In a hammock, above
The basin of a fountain.....

Each of them has worked as willingly as the twenty women in the *Odyssey* who
βησαν επι κρηνην μελανυδρον (= went to the fountain of dark water).

In fact, Rosie and Delia have gone further. They have been prepared to pursue their studies, as the poet George Trakl has said,

Around dark fountain edges.....

Both girls have learned to look into the tenebrous depths of a cryptical text. Rosie and Delia have acquired a lot of technical knowledge merely by performing A LONG SUCCESSION OF EXERCISES. And so have you. Well done! (Your prize, for which you can throw dice, is a unintendedly Stygian painting by Adam Fox called *Dawn on the Moscow River*. It has been hanging for a year in my peat-shed.) All three of you should relax for a while, and repeat eight words of Lorca:

Mi corazón reposa junto a la fuente fría

(= My heart rests beside the cool fountain).

All three of you have undergone a brief apprenticeship in cryptanalysis. I deliberately left you to tease out a few of the anagrams for yourselves. How did I know that you wouldn't ask for help? Well, Ah knowed how smart youse are.

I'm sorry that the cryptograms weren't a lot jollier, but they were taken from real life, and they provided us with the necessary material for a learning exercise. (Would you rather be house-trained, or field-trained?) It has been profitable for us to drink from the bitter fountain of published cryptograms. No such drinking in the present means no competent cryptanalysis in the future. Listen! If a scholar for the whole of his lifetime has drunk only tap-water, HE MUST BE IGNORED when he presumes to describe the waters of different wells. A strong mind speaks with the mouth of a horse that has gone to the well and drunk from it. A weak mind fools about with words like *hippology* and *potability*. Listen again. THERE IS NO SUBSTITUTE FOR DOING THINGS. Even Odin must drink, at the cost of an eye, from Mimir's fountain of knowledge. The Völva says,

*alt veit ek, Óðinn!
hvar þú auga falt:
í inum mæra
Mímis brunni.....*

I know all, Odin!
where you hid your eye:
in that pure
fountain of Mimir.....

It saddens Liu Zongyuan that people are unwilling to imbibe real wisdom.

真 源 了 無 取

(= The true fountain of knowledge is not accepted).

Liu Zongyuan could be talking about the bad side of our modern world. (Oceans of useless information. Mountains of fatuous paper. Few real *readers*. Vulgar vacuous television. And people gabbling nonsense into mobile phones.)

Yet some of us have different standards. David says to the LORD in Psalm 36,

עִמְךָ מִקּוֹר חַיִּים (= with thee is the fountain of life).

If you accept that the Bible is 'the true fountain of knowledge', you'll hear the chatter of misguided cryptographers as little more than what John Buchan calls 'a buzz of flies by the fountain'.

You know how Sartre makes Orestes speak in the third act of *Les Mouches*:

Regardez! Regardez les mouches! (= Look! Look at the flies!).

And you recall the flies that Gogol describes in *Dead Souls*, part I, chapter 1:

.....ОНИ ВЛЕТЕЛИ ВОВСЕ НЕ С ТЕМ, ЧТОБЫ ЕСТЬ,
НО ЧТОБЫ ТОЛЬКО ПОКАЗАТЬ СЕБЯ.....

(= they fly in not so as to eat, but merely so as to exhibit themselves).

The persons who addressed me really wanted to be *looked at*. They took enormous pains to *exhibit themselves* in public. (So far as I know, they believed themselves to be the most significant players on the board! A certain department of human affairs tends to breed neurosis, obsession, and fantasy.) Will the said persons rebuke me today for repeating in public things which they originally said to me in public, and which can now be found in public libraries? I think not.

It may please them to recall five words from a sonnet by the great Irish mathematician, Sir William Rowan Hamilton:

.....*all the hidden fountains gush*.....

I find more pleasure in reading Horace's promise to the fountain of Bandusia:

Fies nobilium tu quoque fontium

(= You too will become one of the famous fountains).

Any writer who follows the example of John Buchan will be prepared to immortalize the ignoble flies along with the fountain. Remember Psalm 118. 12:

סְבוּנֵי כְדָבוּרִים (= They compassed me about like bees.....).

It isn't a matter of the fountain punishing the flies.

In *Knight of the Burning Pestle*, by Beaumont and Fletcher, Humphrey declares,

My soul's the fount of vengeance.....

And in 'The Fountain of Bakhchisarai', Pushkin asks a question about Giray:

Горит ли местию кровавой.....? (= Is he burning for cruel revenge.....?).

Neither passage is germane to the present case. My own soul is not 'the fount of vengeance', and although I *have* paced up and down in the palace of Bakhchisarai, I haven't written my tale in a spirit of vengeful self-importance!

Vengeance belongs to God.

Self-importance is an ugly form of mental unhealth.

So is continual seriousness. In Job 41. 29 (AV), we read of the leviathan:

וַיִּשְׂחַק לְרֵעַשׁ כִּידוֹן (= he LAUGHETH at the shaking of a spear).

Horace once asked,

ridentem dicere verum quid vetat...?

(= What's to stop a man from LAUGHING while he tells the truth?).

Nietzsche adapted Horace's words for the title page of *Der Fall Wagners* (= The Wagner Case), which is one of the funniest pieces of German literature:

ridendo dicere severum (= to say what is serious through LAUGHTER).

The book of Proverbs is a book of WISDOM. In Proverbs 17. 22 we read,

לֵב שִׂמְחָה יִיטִיב גֵּהֵה (= A merry heart doeth good like a medicine).

Wei Yingwu would have relished that piece of wisdom. He speaks in one poem about being reunited with his friends, and says,

歡 笑 情 如 舊

(= We laugh merrily, as we did in the old days).

Two bursts of laughter in *Njál's Saga*, separated by Snorri's quietly sung quatrain, come as signs of a return to wisdom and good sense.

Pá varð hlátur mikill (= Then there was a lot of laughter).

Hlógu menn nú allmjög (= Now men laughed heartily).

As my Finnish readers would say, *Ei elämä irvistellen somene* (= You won't enhance your life by scowling). It's good for scholars to laugh merrily. Those whom Poe calls 'the many far wiser than we', those whom Catullus calls *senes severiores* (= the rather serious old men), are often bad teachers precisely because they can never laugh at themselves. And herein is a marvellous thing. If you find out more by laughing than they find out by scowling, *they aren't pleased*.

PLUS LÉGER QU'UN BOUCHON J'AI DANSÉ SUR LES FLOTS

(= LIGHTER THAN A CORK, I DANCED ON THE WAVES)

Let me employ two outrageous terms. Eleven letters of the Hebrew alphabet are used to build the seven words of Genesis 1. 1. In 400 gematria these eleven 'matter' letters add up to 1084, while the unused 'antimatter' letters add up to 411. The *tohu* of Genesis 1. 2 (תהו: tau-he-wau) also adds up in 400 gematria to 411.

Here are three facts that you can ruminate on the train while those less fortunate than yourself are reading their booby-documents about 'aims' and 'objectives'.

Even great physicists, as Rimbaud would say, *N'ont pas subi tohu-bohus plus triomphants* (= Have not undergone more triumphant tohu-bohus).

(But hark, the doorbell! Jane Dasey has come over with a poster-sized photograph that she wants me to paint from. I'll ask her to sing a couple of pieces before she leaves.)

What was I saying? Oh, yes. Some lessons are most effectively learned at play. The inspired author of Psalm 104 wrote,

לוֹיֹתָן זֶה-יִצְרַת לְשַׁחֵק

(= there is that leviathan, whom thou hast made to PLAY).

There are even lessons about literature which it is best to learn in the context of an adversarial GAME.

In Isaiah 22. 18 we find a sporting allusion which 'the many far wiser than we' would prefer the Bible not to contain:

צִנּוּף יִצְנַפֵּךְ צִנְפָה כְּדוּר אֶל אֶרֶץ רַחֲבַת יָדַיִם

(= He will surely violently turn and toss thee LIKE A BALL into a large country).

Whenever I consider the genuine slightness of my own intellectual faculties, I feel grateful to the cryptographers who played the game by tossing the ball at me as they did.

Today, if I see cryptic chrysanthemums in a poetic text, I tend to recognize them for what they are.

The same goes for root vegetables.

In chapter 13 we'll look at the heading of Psalm 7, which encodes the square root of two.

'Hold on,' says Colin Tate the commentator. 'I know that square roots are important to mathematicians. But who ever talks about square roots outside the mathematical world?'

Lots of people. In 2007, Poland's relationship with the European Union came to be dominated by an unforgettable slogan:

PIERWIĄSTEK KWADRATOWY ALBO ŚMIERĆ!

(= THE SQUARE ROOT OR DEATH!).

'Never mind European politics,' says Colin Tate. (In other words, *Let me put my hands over my ears while you answer me.*) 'What place is there for a *square root* in the heading of a musical or literary composition?'

That question may strike some readers as sensible enough. The British physicist Sir Arthur Eddington once said,

One can no more analyze great imponderables by use of the scientific method than he can extract the square root of a sonnet.

And yet you'd be surprised. In 1968 a group called The Nightshadows issued an LP whose title was *The Square Root of Two*.

Then in 1986 Michael Golder's play *The Square Root of Three* was produced in Connecticut. One year later the play was reviewed in *The New York Times*.

A mom and pop who are drifting apart and a son who plays with dolls don't sound terribly amusing, but then we're not humorists like Michael Golder. Mr Golder has written "The Square Root of Three", which is billed as a comedy. It has a grandmother who is busy falling in love.....

That reminds me. In 1953 Ralph Bellamy was the star of a film called *The Cube Root of Evil*. And in 1999, the American trio We released an album entitled *Square Root of Minus One*.

'Thanks very much. I've never *heard* of The Nightshadows, I've never *heard* of Michael Golder, I've never *heard* of Ralph Bellamy, and I've never *heard* of We,' says Colin Tate, apparently in the belief that his comprehensive ignorance carries some kind of argumentative force.

'DET ER EN FRYGTELIG HISTORIE!' SAGDE EN HØNE

['IT IS A TERRIBLE STORY!' SAID A HEN]

Unlike most of my readers, Colin Tate will need to be told that the foregoing piece of Danish comes from Hans Christian Andersen.

British children of yesteryear were taught a Norwegian folksong called 'Paul's little hen'. In their songbooks the original line '*Klukk, klukk, klukk, sa høna på haugom*' (= 'Cluck, cluck, cluck, said the hen on the hillside) was rendered '*Cluck, cluck, cluck, cried the poor little creature*.'

Rubber-duck scholars who react to new information in the manner of Colin Tate always remind me of those words.

'Cluck, cluck, cluck,' cry the poor little creatures. 'Cluck, cluck, cluck.'

Someone help me. Is a man supposed to apologize for KNOWING THINGS? Or is he an eccentric because he knows things that another man hasn't heard of? In the course of his academic life, Colin Tate has managed to find out very little. He has been content to dwell in the windowless reptile-house of received ideas. Now Dr Tate is an active and intelligent worker. Unlike certain quasi-scholars of my acquaintance, he is not energized by malice and conceit. But he lives in a cell, and his anchorite's mind is immured in ignorance. Last month, when Colin Tate saw a man painting a wall with watered-down horse manure, he said that the man was insane. (To the ignorant, whatever is unfamiliar is mad.) In fact, the utterly sane painter worked in our local folk museum, and he was encouraging moss to grow on a wall which he had moved stone by stone from a nearby farm.

Forty years ago I stayed up all night to keep watch as a litter of piglets was born. If Colin Tate had known me then, he would have called me mad. He believes that sane people go to bed at night, and that they derive all their knowledge from libraries. Alas! Dr Tate is unwinged, and he doth not range. For more than ten years he has tilled his tiny field of study with the subhuman singlemindedness of a professional assassin. The consequence is that whenever he tries to operate outside his own field, he reveals himself to be almost completely illiterate. If you show him a herbarium of alyssum, arbutus, flax, geum, lobelia, mignonette, nolana and campanula, solidago and calceolaria, tecoma, telopea, and viola, he

will *never* think of the eleven Confederate states Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia. But lo! In a vision I see a young admirer of Colin Tate who wants to become a Biblical botanist. Please allow me to advise him.

HOW TO TURN INTO A SCHOLAR LIKE COLIN TATE

Write an utterly useless thesis by applying the fantastical system of Baron Wellhausen to the vegetal life of the Pentateuch. At the insistence of your supervisor, Prof. Friedrich August Lauch, include seven utterly useless appendices in your thesis. As soon as you graduate, do four things. First, apply for an academic position. Secondly, give your thesis an arresting title. Thirdly, ask Prof. Johann Georg Rosenkohl to provide you with a foreword. Fourthly, entrust your thesis to a publisher who can plant it in several university libraries. If you do that, you will get tenure. No individual person will ever buy *Also sprach Aspidistra*, because the publisher wants \$180 per copy. That doesn't matter. In the course of the next three decades, only five persons will borrow *Also Sprach* from university libraries. That doesn't matter either. You're a success. You're a member of the academic lodge. I mean to say, you're sitting there in the Gunkelbunker with Gattung and the boys. *Heilsgeschichte!* From now on you can write utterly useless books and articles in accordance with the lodge maxims. *Arbeit macht Bibliographie. Kraft durch Fußnoten. Triumph der Brille.*

Joke over. Fifty years after your death, will you be remembered as a success? Or will some Hamlet stand on your grave, and ask, 'Where be his quiddits now, his quilletts, his cases, his tenures, and his tricks?'

Colin Tate ought to read the surprisingly moderate dictum of John Loeffler:

Your failure to be informed does not make me a wacko.

Good writers will often surprise you. A well-known author made one of his characters declare,

'.....the tune's my own invention.'

That author was also the poet who spoke of the sunset-glow fading

.....through laced tendrils of a hanging vine.....

That poet was also the cryptographer who wrote,

*.....the letters of the key-word will indicate which column
is to be used in translating each letter of the message.....*

That cryptographer was also the mathematician who exclaimed,

.....60.25 is not the square root of 3630!

That mathematician was also the chess-player who explained,

*.....the capture of the Red Knight at move 7, and the final "checkmate"
of the Red King, will be found, by anyone who will take the trouble to
set the pieces and play the moves as directed, to be strictly in
accordance with the laws of the game.*

His name was Lewis Carroll.

Many educated people are unaware that Lewis Carroll visited St Petersburg and Moscow in 1867.

Many educated people believe that Lewis Carroll wrote only for children.

“I declare it’s marked out just like a large chess-board!” Alice said at last. “There ought to be some men moving about somewhere -- and so there are!” she added in a tone of delight, and her heart began to beat quick with excitement as she went on. “It’s a great huge game of chess that’s being played -- all over the world -- if this is the world at all, you know. Oh, what fun it is! How I wish I was one of them!.....”

You remember how Chaucer’s Franklin concluded his story. *I kan namoore; my tale is at an ende.* Please allow me to have done with the game whose moves are set forth in the present chapter. I have nothing more to say: and there is no one who can answer questions about the story on my behalf.

(‘It is a terrible story!’ says a hen. ‘It is a toxic narrative,’ says a rubber duck.)

In truth, it is largely a story about the state of the world. Let’s have a break before we move on to chapter 13. Jane is going to sing first a song called ‘But now’, and then a ballad called ‘Demon drivers’. A famous Viennese church appears in the fourth, fifth, and sixth lines of ‘But now’. That’s enough explication. People have begun to realize how very late the hour is. And I’m yawning again. No more talk! Listen to the music.

At night we go on foot along a shore
With pine and rose and shooting star in choir,
But once a heron quavers *nevermore*
I sit in Peter’s nave and quit the lyre.

An organ plays in time beside a prayer
To bid the belfry chime in serenade;
I let the psalter chase away despair,
And say a better grace in mid-Belgrade.

If Latin letters tell in Budapest
Of how the prince of hell has lost his prey,
A swan or two will make me glad to rest
Beside the glassy lake till bracing day.

(So watch and pray, for soon a faithful word
May turn the token moon from red to white,
And once a human cries *the Lord hath heard*,
The gleeful bat replies in clear delight.)

A heron-pair can plumb the hopeful plot
Of coupled years to come; I wait for news,
And travel far, and still forget you not --
But now my sounding will has found a muse

To fill your place, and nightly now the pane
Enjoys a vain recital: vocal squeaks,
Odette in tears, a dismal bat in pain.
Am I insane, or is it you that speaks?

The silver ship of Tarshish
Will brighten up your nights
With spooky-wooky music
And multicoloured lights.

The silver ship is friendly;
She comes from heav’n above.
Her sailors preach a gospel
Of universal love.

‘Our job is home improvement!
We’ve left our first address.
You know you need assistance:
You’ve made a dreadful mess.

‘We’ll fix your population,
We’ll stop your warring states;
We’ll handle world pollution:
We want to be your mates!

‘Without our help and guidance,
The human race will die.
We’re more evolved than you are:
You’ve seen the way we fly.’

The silver ship of Tarshish
Is quite an allumeuse;
You try to take her picture,
But all you get is blurs.

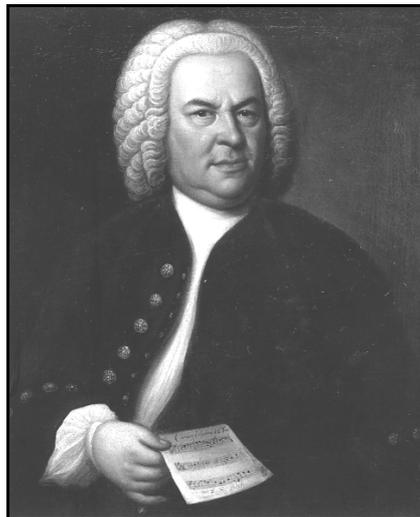
What Miss Dascey has sung may help you to realize that the creation of literature is a serious business. From now on you should get into the habit of studying every word and every syllable of a text. Like Jeremiah 10. 9, or Daniel 2. 43, or Jude 6, or II Thessalonians 2. 11, or Psalm 48. 8 (AV, 48. 7).

Individual syllables are important. The most famous writer of limericks was Edward Lear, and he didn't always perceive the true weight of particular syllables. If you want to see an example of what I mean, look at Lear's line *There was a young lady of Hull*.

There WAS a young LADy of HULL

It is right to stress both the first syllable of LADy and the word HULL. By contrast, to give the word WAS the status of a stressed syllable is absurd. (You might properly stress Lear's second syllable in speech only if you were at pains to emphasize that there really WAS a young lady whose existence had been denied by a previous speaker.) Furthermore, to give the word YOUNG the status of an unstressed syllable is absurd. Yet this thoroughly bad line of Edward Lear, with its impossible second and fourth syllables, is regarded as a model by undiscerning persons who presume to write limericks. If you want to write verse, get rhythm. Rhythm is the principal thing. Very few writers ever get it. I mean to say, many people of intelligence are unable to understand my last eight sentences! Bad writers fool about, as Edward Lear said, 'in the Market, or in all the Gardens round'. Good writers exult in the most severe forms of discipline.

The same goes for good artists and good composers. There is a lot of humour in the music of J S Bach, but Bach himself was not a frivolous person. At the end of his life he said modestly, *Ich habe fleißig seyn müssen* (= I had to work hard). Every student of the Bible should resolve to follow Bach's example.



Today I received in the post a journal to which I had contributed an article. It angered me to find that the editors had altered my layout and language, turning serious pieces of textual argument into footnotes, and replacing a perfectly decent phrase (*I want to consider*) with an ungenial pomposity (*I wish to consider*). Outside in the street a baby yells, 'I smash!' What will that baby grow up to be? An editor in an academic publishing house? Oh, well. Before we stop, let me tell you about a new technique that I've devised for creating iridescence. Put about four tablespoonfuls of white paint into a dish. Add a drop of red paint and blend it in thoroughly until you have a dishful of pale pink paint. Repeat the process using five other dishes plus single drops of orange, yellow, green, blue, and purple paint. Then fill up whatever area you want to irisate with little cellular patches of the six different pale colours. It works.

CHAPTER 13: THE ROOT OF DAVID

And one of the elders saith unto me, Weep not: behold, the Lion of the tribe of Juda, the Root of David, hath prevailed to open the book, and to loose the seven seals thereof.

Revelation 5. 5

Last uns frölich Alleluia singen (= Let us joyfully chant Hallelujah).

Sibylla Schwarz

The heading of Psalm 7 runs in Hebrew as follows.

שגיון לדוד אשר-שר ליהוה על-דברי-כוש בן-ימיני

(= Shiggaion of David, which he sang unto the LORD,
concerning the words of Cush the Benjamite).

Aside from its four hyphens the psalm-heading contains ten Hebrew words, or thirty-five characters.

Let me spell out each of the ten Hebrew words, add it up in 400 gematria, and give an English translation of it in brackets.

shin-gimel-yodh-wau-nun = 300 + 3 + 10 + 6 + 50 = 369 (Shiggaion)

lamedh-daleth-wau-daleth = 30 + 4 + 6 + 4 = 44 (of David)

aleph-shin-resh = 1 + 300 + 200 = 501 (which)

shin-resh = 300 + 200 = 500 (he sang)

lamedh-yodh-he-wau-he = 30 + 10 + 5 + 6 + 5 = 56 (unto the LORD)

ayin-lamedh = 70 + 30 = 100 (concerning)

daleth-beth-resh-yodh = 4 + 2 + 200 + 10 = 216 (the words of)

kaph-wau-shin = 20 + 6 + 300 = 326 (Cush)

beth-nun = 2 + 50 = 52 (the Ben-)

yodh-mem-yodh-nun-yodh = 10 + 40 + 10 + 50 + 10 = 120 (-jamite)

‘What is a *Shiggaion*?’ asks Rosie Stone.

I’m going to answer that difficult question in a roundabout manner. What are the Tribonacci numbers?

Delia begins to leaf through a sheaf of papers. 'I know what the *Fibonacci* numbers are,' she says. 'You start with two predetermined terms, zero and one. Each subsequent term is the sum of the preceding two terms. Look.' She points to a page.

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181

Thanks, Delia, that was lucidly presented. Is everyone happy with the Fibonacci numbers? Positive nods all round. Good!

Fibonacci was an Italian mathematician who led Europe to embrace the Indian numerals. He was born around 1170, and died around 1250.

Tribonacci numbers are like the Fibonacci numbers, but instead of starting with *two* predetermined terms, you start with *three* predetermined terms, and each subsequent term is the sum of the preceding three terms.

0, 0, 1, 1, 2, 4, 7, 13, 24, 44, 81, 149, 274, 504, 927, 1705, 3136, 5768, 10609, 19513

'Tribonacci' is merely a word coined on the basis of *Fibonacci*. There was never any such person as 'Tribonacci'.

Now look at Psalm 9. 16 (= verse 17 in the Hebrew text).

נודע יהוה משפט עשה בפעל כפיו נוקש רשע הגיון סלה

The LORD is known by the judgment which he executeth:
the wicked is snared in the work of his own hands.

Higgaion. Selah.

Have you ever noticed the strange words *Higgaion* and *Selah* in the AV, or have you ever wondered what they meant?

Selah is a musical repeat-mark. It means, 'Sing or play that sentence again.'

Higgaion is a harmonic direction. It means, 'Sing or play the melody in thirds.'

Go to the middle of a piano keyboard, and play the white-note scale of *d* with the third finger of your right hand. (Middle C is the seventh note, *c*'.)

d e f g a b c' d'

Now play the scale once again in that manner, this time accompanying each note with the note two steps below. You'll accompany the first note *d* with the note *B*, the second note *e* with the note *c*, and so on. Use the first finger of your right hand to play each of the lower accompanying notes.

A modern English-speaking musician will say that you have played the white-note scale of *d* 'in thirds'.

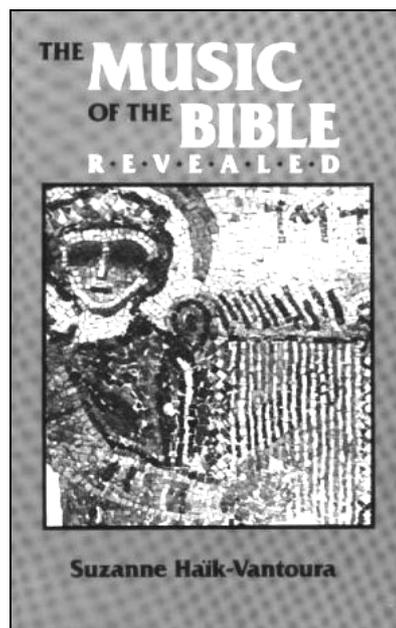
B + d c + e d + f e + g f + a g + b a + c' b + d'

An ancient Hebrew musician will say that you have played the white-note scale of *d* 'Higgaion'. And Shiggaion is to Higgaion as Tribonacci is to Fibonacci, for in both cases the first word was coined on the basis of the second word. The Shiggaion is a musical form, invented by David, which involves both harmony

and counterpoint. Over an independent wandering bass-line, the melody of a Shiggaion is played in thirds.

‘That sounds really interesting,’ says Rosie. ‘Where can we find out about the ancient music of Israel?’

What-ho. That (as Nabokov said in another context) *is a somewhat personal subject*. I have come to believe that the ancient music of Israel had two main forms: an early form, associated with the original ‘unpointed’ texts, and a later form, associated with the ‘pointed’ texts. If you want to study the later form, you should read Suzanne Haïk-Vantoura, *The Music of the Bible Revealed* (BIBAL Press: Berkeley, 1991).



If you want to study the early form, you can read chapters 14, 15, 16, and 17 of *THE LORD SHALL COUNT*. But stay with me for now!

Let’s go back to Psalm 7, which like any other psalm is 50% text and 50% music.

You’ll notice that the first four words of the psalm, or the *first fourteen characters* of the psalm, add up to 1414.

shin-gimel-yodh-wau-nun = $300 + 3 + 10 + 6 + 50 = 369$ (Shiggaion)

lamedh-daleth-wau-daleth = $30 + 4 + 6 + 4 = 44$ (of David)

aleph-shin-resh = $1 + 300 + 200 = 501$ (which)

shin-resh = $300 + 200 = 500$ (he sang)

Look at that gematric total.

$$369 + 44 + 501 + 500 = 1414$$

Does it remind you of something? Yes, of course! The four-digit square root of two is 1.414.

David was one of the most important figures in the history of music. For its part the square root of two is one of the most important numbers in musical physics.

The square root of two also represents the answer to a question which tortured many ancient geometers: what unitary length has the diagonal of a square whose side has a length of one unit?

Leaving geometry for the present, we'll think about music.

A musician uses the square root of two to *divide the scale exactly in two*. The rising white-note scale of *d*, which we'll consider at length in the next chapter, runs as follows.

d e f g a b c' d'

On an eight-note harp whose strings have equal thickness and tension, that scale's eight notes will be sounded by strings having unitary lengths respectively of 864, 768, 729, 648, 576, 512, 486, and 432.

Imagine that we decide to add a string sounding the note *g#*, which is exactly intermediate in pitch between top *d* and bottom *d'*.

To find the unitary length of the *g#* string, we need to use the square root of two.

We can either divide 864 by the square root of two, or multiply 432 by the square root of two.

$$[864 \text{ divided by root } 2] = [432 \text{ multiplied by root } 2] = 610.9402589$$

When we correct 610.9402589 to the nearest whole number, we get 611 as a unitary length for the *g#* string.

You can skip the rest of this page if you want to escape from musical technicality. In later chapters we'll consider a form of tuning called 'equal temperament' which uses the twelfth root of two (1.0594631) to divide the octave into twelve logarithmically equal parts. On a thirteen-note harp whose strings have equal thickness and tension, what we call the equally tempered chromatic scale of *d* will be sounded by strings having unitary lengths as follows: 864 *d*, 816 *d#*, 770 *e*, 727 *f*, 686 *f#*, 647 *g*, 611 *g#*, 577 *a*, 545 *a#*, 514 *b*, 485 *c'*, 458 *c#'*, and 432 *d'*.

The number 611 may be manipulated to yield mnemonics which cover many of these string-lengths. Take note of three facts to begin with.

First, the reversal of 611 is 116.

Secondly, $611 = 13 \times 47$.

Thirdly, $116 = 2 \times 2 \times 29$, or 4×29 , or 58×2 .

Don't worry if at present you haven't a clue what equal temperament is! But do take a moment to observe how useful a Protean number like 611 can be.

| | | |
|-------------------------------|---|--|
| 611 | = | 611 <i>g#</i> |
| 611 + 116 | = | 727 <i>f</i> |
| 611 = 13 x 47, and 1347 | = | 770 <i>e</i> + 577 <i>a</i> |
| 611 = 13 x 47, and 1347 + 116 | = | 816 <i>d#</i> + 647 <i>g</i> |
| 611 = 13 x 47, and 1347 - 116 | = | 686 <i>f#</i> + 545 <i>a#</i> |
| 611 = 13 x 47, and 1347 + 611 | = | the three palindromes 727 <i>f</i> + 686 <i>f#</i> + 545 <i>a#</i> |
| 116 = 4 x 29, and 116 + 429 | = | 545 <i>a#</i> |
| 116 = 2 x 2 x 29, and 2 x 229 | = | 458 <i>c#'</i> |
| 116 = 58 x 2, and 582 | = | 611 <i>g#</i> + 485 <i>c'</i> - 514 <i>b</i> |

Delia Benn is not impressed by the sum of 369, 44, 501 and 500. ‘What the first four words of Psalm 7 add up to is neither here nor there,’ she says. ‘If those four words have anything to do with the square root of two, we should expect them to contain some allusion to the Hebrew word for ROOT.’

The modern English word ROOT has both a general vegetal meaning and a particular mathematical meaning. Delia is presuming that the ancient Hebrew word for ROOT (shin-res-shin) had the same two meanings. Nonetheless, apart from that presumption, what she says is altogether sensible.

Let us consider the Hebrew text of Psalm 7. Does the heading of the psalm contain any verbal reference to a ROOT? Even a cryptic reference?

Yes, it does. Look at the third and fourth words of the heading, which are hyphenated in the original.

aleph-shin-res **HYPHEN** *shin res* (= which he sang)

Say the three English words ‘a share shower’, and you’ll get some idea of what the two Hebrew words sound like. David’s use of language is striking without being infelicitous. The two words *aleph-shin-res* hyphen *shin-res* are bound to catch both the eye and the ear of a careful reader. What is the point of connecting these two words with a hyphen?

If you take away the first letter of the first word, and the second letter of the second word, you’ll see what the point is.

~~*aleph*~~ ***shin-res*** *hyphen* ***shin*** ~~*resh*~~

The Hebrew word *shin-res-shin* (*shoresh*) means ROOT.

And there’s more. When you add up the first thirteen characters of the psalm in 400 gematria (the eleventh, twelfth, and thirteenth characters spell *shoresh*), you get a total of 1214.

$$\text{shin-gimel-yodh-wau-nun} = 300 + 3 + 10 + 6 + 50 = 369$$

$$\text{lamedh-daleth-wau-daleth} = 30 + 4 + 6 + 4 = 44$$

$$\text{aleph-shin-res} = 1 + 300 + 200 = 501$$

$$\text{shin} = 300$$

$$369 + 44 + 501 + 300 = 1214$$

1214 is the 400 gematric value of the following three-word Hebrew phrase.

shin-res-shin *shin-nun-yodh-mem* *daleth-wau-daleth*

The three words of that phrase add up as follows.

$$[300 + 200 + 300] + [300 + 50 + 10 + 40] + [4 + 6 + 4] = 1214$$

And that three-word phrase means ‘David’s root of two’, which may not be the whole tale. You see, another numerical cryptogram appears to hint at a more comprehensive ‘root’. When you add up the last six words of the psalm’s heading in 400 gematria, you get a total of 814.

$$\text{ayin-lamedh} = 70 + 30 = 100$$

$$\text{daleth-beth-resh-yodh} = 4 + 2 + 200 + 10 = 216$$

$$\text{kaph-wau-shin} = 20 + 6 + 300 = 326$$

$$\text{beth-nun} = 2 + 50 = 52$$

$$\text{yodh-mem-yodh-nun-yodh} = 10 + 40 + 10 + 50 + 10 = 120$$

$$100 + 216 + 326 + 52 + 120 = 814$$

814 is the 400 gematric value of a two-word Hebrew phrase.

shin-resh-shin daleth-wau-daleth

The two words of the phrase add up as follows.

$$[300 + 200 + 300] + [4 + 6 + 4] = 814$$

And the two-word phrase means ‘the root of David’.

Now the four-digit square root of two, 1.414, is accurate enough for many purposes, but the heading of Psalm 7, which contains *thirty-five* Hebrew characters, encodes a value for the square root of two which runs to *thirty-five digits*.

1.414 213 562 373 095 048 801 688 724 209 698 0

In 400 gematria the ten words of Psalm 7’s heading (= verse 1 of the Hebrew text) have values as follows.

369 44 501 500 56 100 216 326 52 120

Look at the fourth, fifth, sixth, and seventh digits of the square root of two.

1.414 **213** 562 373 095 048 801 688 724 209 698 0

David uses these four large-font digits, which add up to TEN, as a template for his arrangement of the FIRST TEN DIGITS of the square root of two. He divides the ten digits into four groups containing respectively FOUR, TWO, ONE, and THREE digits. Notice that four, two, one, and three are the middle four digits of the ten-digit group. (We’ll ignore the decimal point in what follows.)

1414 21 3 562

Once the four groups are constituted, David puts the twenty-seven digits of the heading's gematric values to work.

$$\text{Four digits} \quad 1414 = 369 + 44 + 501 + 500$$

$$\text{Two digits} \quad 21 = 5 + 6 + 10$$

$$\text{One digit} \quad 3 = 0 + 2 + 1$$

$$\text{Three digits} \quad 562 = 632 - 65 - 2 - 1 - 2 - 0$$

You'll observe that the four groups of digits which appear on the left-hand side of the four equal signs add up to 2000.

$$1414 + 21 + 3 + 562 = 2000$$

We may interpret this number as 2.000.

Now look at the eighth, ninth, and tenth digits of the square root of two.

1.414 213 **562** 373 095 048 801 688 724 209 698 0

David uses these three large-font digits to generate a template for his arrangement of the next nine digits (DIGITS ELEVEN TO NINETEEN) of the square root of two.

He divides the nine digits into four groups containing respectively THREE, ONE, THREE, and TWO digits.

THREE, ONE, THREE, and TWO combine to give the number 3132, which is generated by the three digits 5, 6, and 2 as follows.

$$[56 + 2] \times [56 - 2] = 3132$$

For the second time David puts the twenty-seven digits of the heading's gematric values to work.

$$\text{Three digits} \quad 373 = 369 + 4$$

$$\text{One digit} \quad 0 = 4 - 5 + 0 + 1$$

$$\text{Three digits} \quad 950 = -50 + 0 + 5 - 6 + 1002 - 1$$

$$\text{Two digits} \quad 48 = 6 + 32 + 6 + 5 + 2 - 1 - 2 + 0$$

Now look at the tenth, eleventh, twelfth, and thirteenth digits of the square root of two.

1.414 213 **562 373** 095 048 801 688 724 209 698 0

David uses these four large-font digits to generate a template for his arrangement of the next eight digits (DIGITS TWENTY TO TWENTY-SEVEN) of the square root of two.

He divides the eight digits into four groups containing respectively TWO, THREE, TWO, and ONE digits.

TWO, THREE, TWO, and ONE combine to give the number 2321, which is generated by the four digits 2, 3, 7, and 3 as follows.

$$23 \text{ set before } [7 \times 3 = 21] \text{ gives } 2321.$$

For the third time David puts the twenty-seven digits of the heading's gematric values to work.

| | | | |
|--------------|-----|---|----------------------------------|
| Two digits | 80 | = | - 3 + 69 + 4 + 4 + 5 + 0 + 1 |
| Three digits | 168 | = | 5 + 0 + 0 + 56 + 100 + 2 - 1 + 6 |
| Two digits | 87 | = | 3 - 2 + 65 + 21 |
| One digit | 2 | = | 2 + 0 |

Now, reading backward, look at the thirteenth, twelfth, eleventh, and tenth digits of the square root of two.

$$1.414 \ 213 \ 56\mathbf{2} \ \mathbf{373} \ 095 \ 048 \ 801 \ 688 \ 724 \ 209 \ 698 \ 0$$

David uses these four large-font digits to generate a template for his arrangement of the next eight digits (DIGITS TWENTY-EIGHT TO THIRTY-FIVE) of the square root of two.

He divides the eight digits into four groups containing respectively TWO, ONE, THREE, and TWO digits.

TWO, ONE, THREE, and TWO combine to give the number 2132, which is generated by the four digits 3, 7, 3, and 2 as follows.

$$[3 \times 7 = 21] \text{ set before } 32 \text{ gives } 2132.$$

For the fourth and last time David puts the twenty-seven digits of the heading's gematric values to work.

| | | | |
|--------------|-----|---|---------------------------------|
| Two digits | 42 | = | 36 + 9 - 4 - 4 + 5 |
| One digit | 0 | = | 0 |
| Three digits | 969 | = | 1500 - 561 + 0 + 0 + 21 + 6 + 3 |
| Two digits | 80 | = | - 2 + 65 - 2 - 1 + 20 |

Using the numbers 4213, 3132, 2321, and 2132 as templates, we have divided up the thirty-five digits of the square root of two into sixteen ‘groups’ of one or more digits. The sixteen ‘groups’ (underlined below) add up to 4799.

- | | | | | |
|-----|--------------|-------------|---|----------------------------------|
| 1. | Four digits | <u>1414</u> | = | 369 + 44 + 501 + 500 |
| 2. | Two digits | <u>21</u> | = | 5 + 6 + 10 |
| 3. | One digit | <u>3</u> | = | 0 + 2 + 1 |
| 4. | Three digits | <u>562</u> | = | 632 – 65 – 2 – 1 – 2 – 0 |
| 5. | Three digits | <u>373</u> | = | 369 + 4 |
| 6. | One digit | <u>0</u> | = | 4 – 5 + 0 + 1 |
| 7. | Three digits | <u>950</u> | = | – 50 + 0 + 5 – 6 + 1002 – 1 |
| 8. | Two digits | <u>48</u> | = | 6 + 32 + 6 + 5 + 2 – 1 – 2 + 0 |
| 9. | Two digits | <u>80</u> | = | – 3 + 69 + 4 + 4 + 5 + 0 + 1 |
| 10. | Three digits | <u>168</u> | = | 5 + 0 + 0 + 56 + 100 + 2 – 1 + 6 |
| 11. | Two digits | <u>87</u> | = | 3 – 2 + 65 + 21 |
| 12. | One digit | <u>2</u> | = | 2 + 0 |
| 13. | Two digits | <u>42</u> | = | 36 + 9 – 4 – 4 + 5 |
| 14. | One digit | <u>0</u> | = | 0 |
| 15. | Three digits | <u>969</u> | = | 1500 – 561 + 0 + 0 + 21 + 6 + 3 |
| 16. | Two digits | <u>80</u> | = | – 2 + 65 – 2 – 1 + 20 |

‘Wait a moment,’ says Delia. ‘How can you be sure that you have the correct number of digits on the *right*-hand side of each equal sign?’

Let me refine that intelligent question. Is it possible to link the first digit of each underlined group with the first digit that comes after the equal sign?

‘*These two linking in marriage,*’ says your cousin Adam, who is standing by the door with a book in each hand.

‘Are you quoting from somewhere?’ asks Rosie.

‘I am indeed,’ your cousin replies. He reads first from a venerable and rather free translation of *Ruslan and Lyudmila*.

‘His daughter is the chosen mate
Of Prince Ruslan, and these TWO LINKING
In marriage, old Vladimir’s drinking
Their health, a handsome cup and great
To his lips held.....’

Then he reads from Pushkin’s more felicitous original:

‘Меньшую дочь он выдавал
За князя храброго Руслана
И мед из тяжкого стакана
За их здоровье выпивал.’

Your cousin points to the cover-picture of his Russian version. ‘In the case of every equation,’ he says, ‘you have to link a first-digit Lyudmila on the left with a first-digit Ruslan on the right.’



After a moment Adam continues. ‘What you want is some device corresponding to Vladimir, whom the translator describes as *these TWO LINKING in marriage.*’

‘Can the two-linking device itself be numerical?’ asks Delia.

Yes, it can.

‘Hold on,’ says Rosie. ‘We want to know if it’s possible to link the first digit of each underlined group with the first digit that comes after the equal sign.’ She pauses. ‘How can we link those two digits *numerically?*’

Easily!

We say, for example, ‘The first digit of the second group (digit number FIVE of the square root of two) goes with digit number TWELVE of the psalm-heading’s twenty-seven digits.’

Then we say, ‘Let the number 512 denote that FIVE goes with TWELVE.’ Is that clear? The number 512 becomes our two-linking device for that particular pair of digits.

Rosie nods happily, and your cousin goes out to the garden.

We’re in business! Let’s go.

Here are the thirty-five digits of David's value for the square root of two.

1. 1 2. 4 3. 1 4. 4 5. 2 6. 1 7. 3 8. 5 9. 6
 10. 2 11. 3 12. 7 13. 3 14. 0 15. 9 16. 5 17. 0 18. 4
 19. 8 20. 8 21. 0 22. 1 23. 6 24. 8 25. 8 26. 7 27. 2
 28. 4 29. 2 30. 0 31. 9 32. 6 33. 9 34. 8 35. 0

And here are the twenty-seven digits which we find in the ten numerated words of Psalm 7's heading.

1. 3 2. 6 3. 9 4. 4 5. 4 6. 5 7. 0 8. 1 9. 5
 10. 0 11. 0 12. 5 13. 6 14. 1 15. 0 16. 0 17. 2 18. 1
 19. 6 20. 3 21. 2 22. 6 23. 5 24. 2 25. 1 26. 2 27. 0

Remember how we've divided up the thirty-five digits of the square root of two into sixteen 'groups' of one or more digits. Let's construct a set of two-linking numbers which will tie the first digit of each underlined group to the first digit that comes after the equal sign.

First we'll deal with groups 1, 2, 3, and 4.

- 1. Four digits 1414 = 369 + 44 + 501 + 500
- 2. Two digits 21 = 5 + 6 + 10
- 3. One digit 3 = 0 + 2 + 1
- 4. Three digits 562 = 632 - 65 - 2 - 1 - 2 - 0

The first digit of the first group (digit number ONE of the square root of two) goes with digit number ONE of the psalm-heading's twenty-seven digits.

Let the number 11 denote that ONE goes with ONE.

The first digit of the second group (digit number FIVE of the square root of two) goes with digit number TWELVE of the psalm-heading's twenty-seven digits.

Let the number 512 denote that FIVE goes with TWELVE.

The only digit of the third group (digit number SEVEN of the square root of two) goes with digit number SIXTEEN of the psalm-heading's twenty-seven digits.

Let the number 716 denote that SEVEN goes with SIXTEEN.

The first digit of the fourth group (digit number EIGHT of the square root of two) goes with digit number NINETEEN of the psalm-heading's twenty-seven digits.

Let the number 819 denote that EIGHT goes with NINETEEN.

Now we'll deal with groups 5, 6, 7, and 8.

- 5. Three digits $\underline{373} = 369 + 4$
- 6. One digit $\underline{0} = 4 - 5 + 0 + 1$
- 7. Three digits $\underline{950} = -50 + 0 + 5 - 6 + 1002 - 1$
- 8. Two digits $\underline{48} = 6 + 32 + 6 + 5 + 2 - 1 - 2 + 0$

The first digit of the fifth group (digit number ELEVEN of the square root of two) goes with digit number ONE of the psalm-heading's twenty-seven digits.

Let the number 111 denote that ELEVEN goes with ONE.

The only digit of the sixth group (digit number FOURTEEN of the square root of two) goes with digit number FIVE of the psalm-heading's twenty-seven digits.

Let the number 145 denote that FOURTEEN goes with FIVE.

The first digit of the seventh group (digit number FIFTEEN of the square root of two) goes with digit number NINE of the psalm-heading's twenty-seven digits.

Let the number 159 denote that FIFTEEN goes with NINE.

The first digit of the eighth group (digit number EIGHTEEN of the square root of two) goes with digit number NINETEEN of the psalm-heading's twenty-seven digits.

Let the number 1819 denote that EIGHTEEN goes with NINETEEN.

Now we'll deal with groups 9, 10, 11, and 12.

- 9. Two digits $\underline{80} = -3 + 69 + 4 + 4 + 5 + 0 + 1$
- 10. Three digits $\underline{168} = 5 + 0 + 0 + 56 + 100 + 2 - 1 + 6$
- 11. Two digits $\underline{87} = 3 - 2 + 65 + 21$
- 12. One digit $\underline{2} = 2 + 0$

The first digit of the ninth group (digit number TWENTY of the square root of two) goes with digit number ONE of the psalm-heading's twenty-seven digits.

Let the number 201 denote that TWENTY goes with ONE.

The first digit of the tenth group (digit number TWENTY-TWO of the square root of two) goes with digit number NINE of the psalm-heading's twenty-seven digits.

Let the number 229 denote that TWENTY-TWO goes with NINE.

The first digit of the eleventh group (digit number TWENTY-FIVE of the square root of two) goes with digit number TWENTY of the psalm-heading's twenty-seven digits.

Let the number 2520 denote that TWENTY-FIVE goes with TWENTY.

The only digit of the twelfth group (digit number TWENTY-SEVEN of the square root of two) goes with digit number TWENTY-SIX of the psalm-heading's twenty-seven digits.

Let the number 2726 denote that TWENTY-SEVEN goes with TWENTY-SIX.

Finally, we'll deal with groups 13, 14, 15, and 16.

$$13. \quad \text{Two digits} \quad \underline{42} \quad = \quad 36 + 9 - 4 - 4 + 5$$

$$14. \quad \text{One digit} \quad \underline{0} \quad = \quad 0$$

$$15. \quad \text{Three digits} \quad \underline{969} \quad = \quad 1500 - 561 + 0 + 0 + 21 + 6 + 3$$

$$16. \quad \text{Two digits} \quad \underline{80} \quad = \quad -2 + 65 - 2 - 1 + 20$$

The first digit of the thirteenth group (digit number TWENTY-EIGHT of the square root of two) goes with digit number ONE of the psalm-heading's twenty-seven digits.

Let the number 281 denote that TWENTY-EIGHT goes with ONE.

The only digit of the fourteenth group (digit number THIRTY of the square root of two) goes with digit number SEVEN of the psalm-heading's twenty-seven digits.

Let the number 307 denote that THIRTY goes with SEVEN.

The first digit of the fifteenth group (digit number THIRTY-ONE of the square root of two) goes with digit number EIGHT of the psalm-heading's twenty-seven digits.

Let the number 318 denote that THIRTY-ONE goes with EIGHT.

The only digit of the sixteenth group (digit number THIRTY-FOUR of the square root of two) goes with digit number TWENTY-ONE of the psalm-heading's twenty-seven digits.

Let the number 3421 denote that THIRTY-FOUR goes with TWENTY-ONE.

Now we're ready to set down all sixteen of the two-linking numbers. In terms of Lyudmila Root-of-Two on the left and Ruslan Psalm-Heading on the right.....

1. 11 denotes that ONE goes with ONE.
2. 512 denotes that FIVE goes with TWELVE.
3. 716 denotes that SEVEN goes with SIXTEEN.
4. 819 denotes that EIGHT goes with NINETEEN.

5. 111 denotes that ELEVEN goes with ONE.
6. 145 denotes that FOURTEEN goes with FIVE.
7. 159 denotes that FIFTEEN goes with NINE.
8. 1819 denotes that EIGHTEEN goes with NINETEEN.

9. 201 denotes that TWENTY goes with ONE.
10. 229 denotes that TWENTY-TWO goes with NINE.
11. 2520 denotes that TWENTY-FIVE goes with TWENTY.
12. 2726 denotes that TWENTY-SEVEN goes with TWENTY-SIX.

13. 281 denotes that TWENTY-EIGHT goes with ONE.
14. 307 denotes that THIRTY goes with SEVEN.
15. 318 denotes that THIRTY-ONE goes with EIGHT.
16. 3421 denotes that THIRTY-FOUR goes with TWENTY-ONE.

What happens when we add up all twelve of these two-linking numbers?

$$\begin{aligned} & 11 + 512 + 716 + 819 + 111 + 145 + 159 + 1819 \\ & + 201 + 229 + 2520 + 2726 + 281 + 307 + 318 + 3421 = 14295 \end{aligned}$$

We get a two-linking numbers total of 14295.

The sixteen left-side groups add up to 4799.

$$\begin{aligned} & 1414 + 21 + 3 + 562 + 373 + 0 + 950 + 48 \\ & + 80 + 168 + 87 + 2 + 42 + 0 + 969 + 80 = 4799 \end{aligned}$$

So we have a two-linking total of 14295, and a group total of 4799.

'And on their own those two totals are *almost completely useless*,' says Rosie.

Well, that was frankly spoken! Of course Miss Stone is right.

'We need to establish some mnemonical relation between the two totals,' Rosie continues. 'But that's not all. We should really be talking about THREE totals.' She pauses. 'We've used the twenty-seven digits of the psalm-heading four times, and the psalm-heading has a 400 gematric total of 2284, so we should make some place for four times 2284. That's 9136.' She pauses again. 'There are THREE totals for us to take into account: the two-linking total 14295, the psalm-heading total 9136, and the groups total 4799. We shouldn't regard those totals as meaningful unless we can relate them to each other mnemonically.'

‘Rosie is talking sense,’ says Delia. ‘Taken by itself, the sum of the groups means NOTHING. Taken by itself, the sum of the two-linking numbers means NOTHING. And taken by itself, the sum of the psalm-heading, multiplied by four, means NOTHING.’ She pauses. ‘If this whole business is going to be credible, and if what we have here represents a deliberately wrought mnemonic, then there has to be some kind of relationship between three different numbers: the two-linking total 14295, the title total 9136, and the group total 4799.’

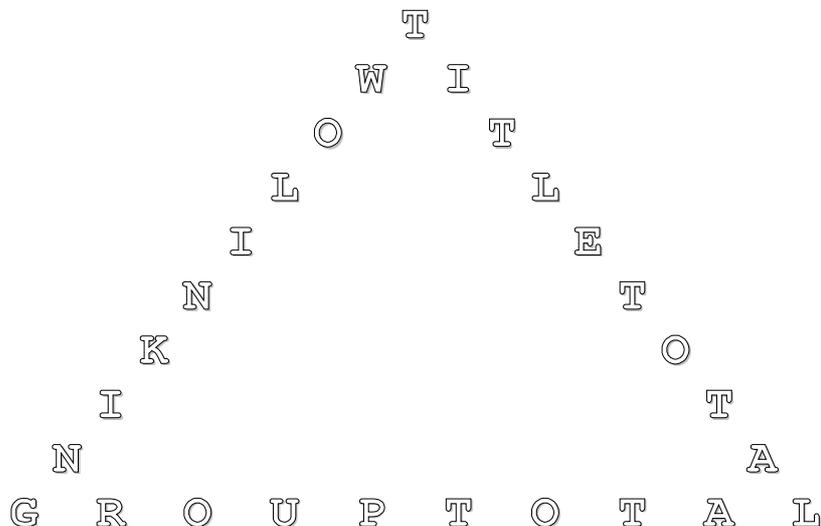
‘We’re talking about a *triangular* relationship,’ says Rosie.

‘Yes, we are!’ Delia is looking into the distance. ‘Go outside and play with a ball, you boys. Miss Stone and I need to think for a moment.’

As we men obey, Rosie begins to sing Thomas Binney’s hymn ‘Eternal Light’.

When we return, more than an hour later, we find that the two girls have created something of considerable elegance.

‘Listen,’ says Delia. ‘You have three totals to worry about. First, the total of the two-linking numbers, which is 14295. Secondly, the total of the title, which is 2284 multiplied by four, or 9136. Thirdly, the total of the groups, which is 4799. Well, you want those three totals to display some kind of triangular relationship. Look at this triangle of letters.’ She points to a page.



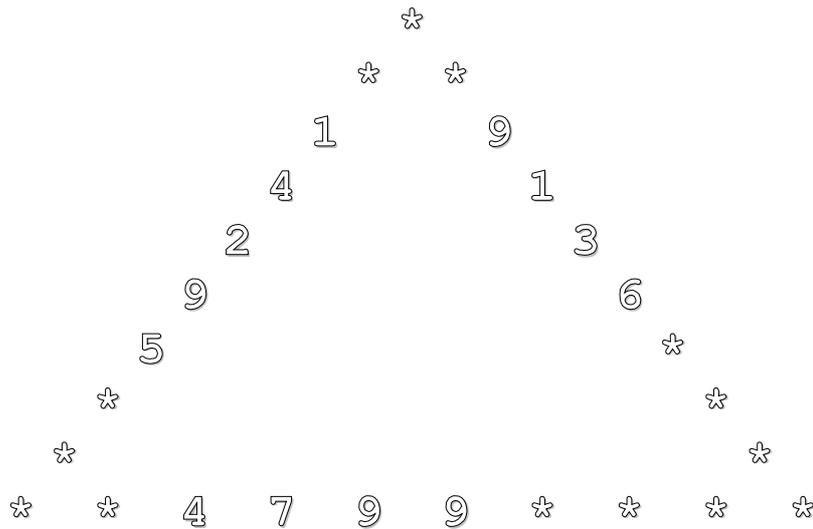
‘You have LINKS on the LEFT,’ says Rosie, ‘TITLE on the RIGHT, and GROUPS on the GROUND. Are we clever?’

You certainly are.

TITLE TOTAL is worthy of the French poet Robert de Montesquiou.

Furthermore, putting the *LINKS on the LEFT* will appeal to my German readers.

‘That’s what I thought!’ says Delia. ‘Now, boys. Keep in mind what goes where, and look at this *letterless* triangle.’ She points to a new page.



‘That is cleverly wrought, girls,’ you say. ‘But where is the *relationship* between the three totals?’

‘Here,’ says Rosie, pointing to a third page. ‘When you add the title-total to the group-total, you get the two-linking total minus its digital product.’

$$9136 + 4799 = 14295 - [1 \times 4 \times 2 \times 9 \times 5]$$

I must say that your equation is altogether beautiful in its simplicity.

‘Yes,’ says Delia, ‘and it allows us to believe in everything that you’ve told us.’

‘Hold on,’ you say. ‘The equation *is* beautiful. In fact, it’s so beautiful that it makes your two triangles unnecessary.’

‘What do you mean?’ asks Delia.

‘I mean that the equation on its own tells us all that we need to know,’ you say. ‘Why did you ladies go to the bother of devising those two triangles?’

‘We wanted to depict the sort of triangular relationship which the three different totals **MUST** enjoy if they want anyone to believe in them,’ says Rosie. She smiles archly. ‘Of course the triangles aren’t concerned merely with the square root of two. I mean, the triangles will be useful to us in the future, if we ever find *anything of the same kind.*’

What do you have in mind, I ask.

Rosie and Delia look at each other. Then they burst out laughing.

‘We’ll favour you with an explanation in a moment,’ says Delia. ‘But we want you to look at two cards first. The first one describes what *may* be a mnemonic based on the number 141.’

Delia sets a large piece of card on the table in front of us.

David derives the arrangement-numbers 4213, 3132, 2321, and 2132 from ten digits of the square root of two (4, 2, 1, 3, 5, 6, 2, 3, 7, and 3).

These ten digits are preceded by the three digits 141.

Four, two, one, and three are respectively the fourth, fifth, sixth, and seventh digits of the square root of two.

Five, six, and two, which generate the arrangement number 3132, are respectively the eighth, ninth, and tenth digits of the square root of two.

Two, three, seven, and three, which generate the arrangement number 2321, are respectively the tenth, eleventh, twelfth, and thirteenth digits of the square root of two.

Three, seven, three, and two, which generate the arrangement number 2132, are respectively the thirteenth, twelfth, eleventh, and tenth digits of the square root of two.

Let's add up these fifteen or [14 + 1] ordinal numbers.

$$[4 + 5 + 6 + 7] + [8 + 9 + 10] + [10 + 11 + 12 + 13] + [13 + 12 + 11 + 10] = 141$$

'It's possible,' you say at length. 'No more than that.'

'We're not sure if we believe it ourselves,' says Rosie. She sets a small piece of card on the table in front of us. 'But we do believe *this* one.'

There are twenty-seven digits in the gematric values of Psalm 7's heading.

There are thirty-five digits in David's value for the square root of two.

The sum of twenty-seven and thirty-five is sixty-two, which is the 22 gematric value of the Hebrew word shin-resch-shin (= root).

$$\text{shin-resch-shin} = 21 + 20 + 21 = 62$$

I reckon that what the girls have written on their two cards is credible. Their different equations help us to see that we haven't been going off our rockers.

Of course the whole idea of the square root of two in the heading of Psalm 7 is sensible enough. I mean to say, David may have felt that he ought to take some personal interest in the square root of two. Why so? Because in both 400 and 22 gematria his name adds up to *fourteen*.

$$400 \text{ gematria: } \text{daleth-wau-daleth} = 4 + 6 + 4 = 14$$

$$22 \text{ gematria: } \text{daleth-wau-daleth} = 4 + 6 + 4 = 14$$

Set the two gematric values side by side, and you'll see that 1.414 really is *the root of David*.

'That's fine,' says Rosie. 'But listen. When you add up the thirty-five digits of David's value for the square root of two, you get one hundred and forty-six.' She shows us a long equation which covers two lines of a page.

$$1 + 4 + 1 + 4 + 2 + 1 + 3 + 5 + 6 + 2 + 3 + 7 + 3 + 0 + 9 + 5 + 0 + 4 \\ + 8 + 8 + 0 + 1 + 6 + 8 + 8 + 7 + 2 + 4 + 2 + 0 + 9 + 6 + 9 + 8 + 0 = 146$$

'Now watch,' Rosie continues. 'One hundred and forty-six is seventy-three multiplied by two.'

She writes without haste underneath the long equation. 'Look.'

$146 = [73 \times 2]$, and the mantissa of the four-digit square root of THREE is 732.

'Here's what we've been wondering,' says Delia. 'Is it possible that David has encoded the square root of *three* along with the square root of *two*?'

Yes, indeed! I was going to leave the square root of three for another time, but now that you gang know the cryptographic form, we'll keep on rooting for numerical truffles. Once we've had a cup of tea and something sweet to eat, that is. My American readers can eat their Hershey's Whatchamacallits. I'm British, so I'm going to eat a Cadbury's Turkish Delight.

And that innocent statement is only out of my mouth

*When straight a barbarous noise environs me
Of owls and cuckoos, asses, apes and dogs.....*

Let me explain. The two lines of verse come from John Milton, but the 'barbarous noise' comes from members of what George Orwell would have called the Anti-Confectionery League.

Ignore these losers who want to make us all live on cabbage and carrot-juice. You needn't ask one of *them* to work out a square root for you. Remember! The human brain runs on sugar. Not until cane sugar hit Europe did Western science get off the ground.

Great men are mindful of sugar. Lloyd George records in the first chapter of his *War Memoirs* something that Gladstone said over dinner in 1892.

He recalled with regret the prohibitive price of sugar candy when he was a boy and told us with gusto of his delight when he discovered recently, in walking along the streets of some obscure town in Cheshire, how cheaply you could today purchase this joy of his departed youth.

It can hardly be without significance that half the people who stir up trouble in churches were never allowed confectionery when they were young. As St Paul says in I Timothy 6. 6, *godliness with contentment is great gain.*

That reminds me. In Philippians 3. 2, Paul warns us to *beware of evil workers*. I tend to beware of hate-filled dictatorial do-gooders. For six months a group of joyless women campaigned to have the sweet counters removed from our local DIY centre. Every time you went to buy a tin of paint there they were, yelping at customers, chanting slogans, holding up placards, making war on male pleasure, and generally gashing themselves with knives according to their manner. Hear the conclusion of the tale. Their stupid campaign failed. Ha, ha, ha.

'What has confectionery got to do with the square root of two?' asks Colin Tate.

Plenty. If you don't believe me, read what Samson has to say about *sweetness* in Judges 14. 14.

מהאכל יצא מאכל ומעז יצא מתוק

Out of the eater came forth meat, and out of the strong came forth sweetness.

Here's the tea. What were we talking about? Oh, yes.

THE SQUARE ROOT OF THREE IN PSALM 7

The heading of Psalm 7 is actually a QUADRUPLE cryptogram.

It encodes the square root of two, the square root of three, the cube root of three, and the cube root of two.

Now the four-digit square root of two, 1.732, is accurate enough for many purposes, but the heading of Psalm 7, which contains *thirty-five* Hebrew characters, encodes a value for the square root of three which runs to *thirty-five digits*.

1.7320 50807 56887 72935 27446 34150 58724

In 400 gematria the ten words of Psalm 7's heading (= verse 1 of the Hebrew text) have values as follows.

369 44 501 500 56 100 216 326 52 120

The first digit of the first word is THREE, the first digit of the second word is FOUR, and the first digit of the third word is FIVE.

David uses these three large-font digits to create a template for his arrangement of ALL THIRTY-FIVE DIGITS of the square root of three.

[THREE followed by FOUR] multiplied by FIVE

He divides the thirty-five digits into ten groups containing a quintuple alternation of THREE and FOUR digits. The ten groups add up to 35156.

173 2050 807 5688 772 9352 744 6341 505 8724

Once the ten groups are constituted, David takes the twenty-seven digits of the heading's gematric values.....

369 44 501 500 56 100 216 326 52 120

.....and puts them to work.

1. Three digits 173 = 3 + 69 + 44 + 50 + 1 + 5 + 0 + 0 - 5 + 6
2. Four digits 2050 = - 100 + 2163 - 2 - 6 - 5
3. Three digits 807 = 212 + 0 - 3 + 694 + 4 + 50 - 150
4. Four digits 5688 = 0 + 5610 + 0 + 2 + 1 + 63 + 2 + 6 + 5 - 2 + 1
5. Three digits 772 = 20 + 3 + 694 + 4 + 50 + 1
6. Four digits 9352 = 5005 + 6100 - 2 - 1632 - 6 + 5 + 2 - 120

7. Three digits 744 = 369 + 445 + 0 + 15 + 0 + 0 – 56 + 1
8. Four digits 6341 = 0 + 0 + 21 + 6326 – 5 – 2 + 1
9. Three digits 505 = – 20 + 36 – 9 – 4 – 4 + 501 + 5 + 0 + 0
10. Four digits 8724 = 5 – 6 + 10021 – 632 – 652 – 12 – 0

Our job must be to discover the two-linking numbers which tie the first digit of each underlined group to the first digit that comes after the equal sign.

The first digit of the first group (digit number ONE of the square root of three) goes with digit number ONE of the psalm-heading's twenty-seven digits.

The first digit of the second group (digit number FOUR of the square root of three) goes with digit number FOURTEEN of the psalm-heading's twenty-seven digits.

The first digit of the third group (digit number EIGHT of the square root of three) goes with digit number TWENTY-FOUR of the psalm-heading's twenty-seven digits.

The first digit of the fourth group (digit number ELEVEN of the square root of three) goes with digit number ELEVEN of the psalm-heading's twenty-seven digits.

The first digit of the fifth group (digit number FIFTEEN of the square root of three) goes with digit number TWENTY-SIX of the psalm-heading's twenty-seven digits.

The first digit of the sixth group (digit number EIGHTEEN of the square root of three) goes with digit number NINE of the psalm-heading's twenty-seven digits.

The first digit of the seventh group (digit number TWENTY-TWO of the square root of three) goes with digit number ONE of the psalm-heading's twenty-seven digits.

The first digit of the eighth group (digit number TWENTY-FIVE of the square root of three) goes with digit number FIFTEEN of the psalm-heading's twenty-seven digits.

The first digit of the ninth group (digit number TWENTY-NINE of the square root of three) goes with digit number TWENTY-SIX of the psalm-heading's twenty-seven digits.

The first digit of the tenth group (digit number THIRTY-TWO of the square root of three) goes with digit number TWELVE of the psalm-heading's twenty-seven digits.

Let's tie the ten pairs of digit-numbers together to make ten two-linking numbers.

1. 11 denotes that ONE goes with ONE.
3. 414 denotes that FOUR goes with FOURTEEN.
3. 824 denotes that EIGHT goes with TWENTY-FOUR.
4. 1111 denotes that ELEVEN goes with ELEVEN.
5. 1526 denotes that FIFTEEN goes with TWENTY-SIX.
6. 189 denotes that EIGHTEEN goes with NINE.
7. 221 denotes that TWENTY-TWO goes with ONE.
8. 2515 denotes that TWENTY-FIVE goes with FIFTEEN.
9. 2926 denotes that TWENTY-NINE goes with TWENTY-SIX.
10. 3212 denotes that THIRTY-TWO goes with TWELVE.

What happens when we add up all ten of these two-linking numbers?

$$11 + 414 + 824 + 1111 + 1526 + 189 + 221 + 2515 + 2926 + 3212 = 12949$$

The ten groups add up to 35156.

The title total is 11420, or $[2284 \times 5]$, because all twenty-seven digits of the title are used FIVE times.

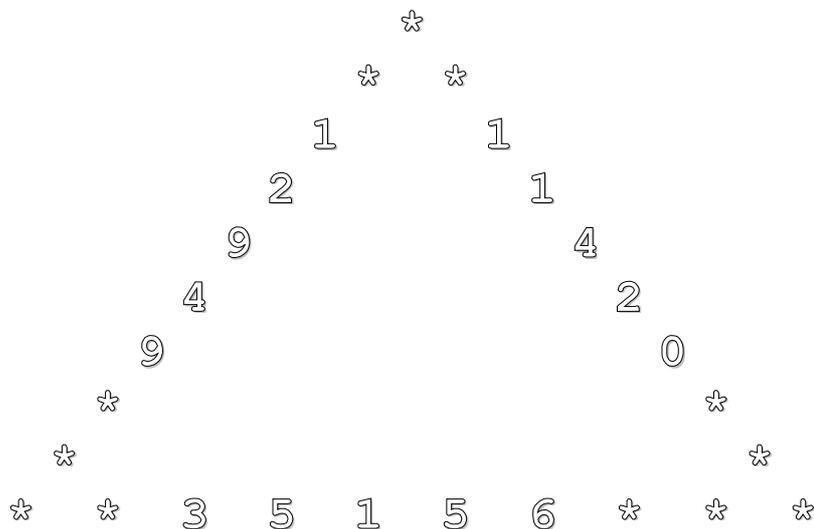
So we have a two-linking total of 12949, a title total of 11420, and a groups total of 35156. How shall we display those three facts?

‘You can use our triangle.’ Delia and Rosie speak in one voice.

All right. Tell me once again what goes where.

‘Links on the left,’ says Delia, ‘title on the right, and groups on the ground.’

Here goes, then.



The two-linking total is 12949. When you subtract the title total 11420 from 12949, you get 1529, or ‘fifteen twenty-nine’. Interpret the groups total 35156 as three-times-five, minus one, five-times-six. While the three-times-five gives you the *first* two digits of ‘fifteen twenty-nine’, the minus one plus five-times-six gives you the *last* two digits of ‘fifteen twenty-nine’.

$$35156 = \text{by interpretation } |3 \times 5| | - 1 + (5 \times 6) | = 12949 - 11420$$

The two girls are nodding in approval.

‘We weren’t able to think of a better mnemonic,’ says Rosie. ‘One of your readers may come up with something a lot neater.’

Yes, indeed. And that would bring me GREAT JOY. I’m serious! The more intelligent collaborators I have in this project, the more chance I have of getting things *right*. Any sane author is grateful when some *miglior fabbro*, some better workman, shows him a more elegant way of doing a particular job. So every diligent reader can help me to refine my own book. Let’s move on.

THE CUBE ROOT OF THREE IN PSALM 7

The four-digit cube root of three, 1.442, is accurate enough for many purposes, but the heading of Psalm 7 encodes a value for the square root of three which runs to *thirty-two digits*.

1.442 2495 7030 7408 3823 2163 8310 7801

The first digit of the mantissa is FOUR, the second digit of the mantissa is FOUR, and the third digit of the mantissa is TWO. David uses these three large-font digits to create a template for his arrangement of ALL THIRTY-TWO DIGITS of the cube root of three.

[FOUR sets of FOUR] multiplied by TWO

He divides the thirty-two digits into EIGHT groups of FOUR. The eight groups add up to 40472.

1442 2495 7030 7408 3823 2163 8310 7801

Once the eight groups are constituted, David takes the twenty-seven digits of the heading's gematric values.....

369 44 501 500 56 100 216 326 52 120

.....and puts them to work.

1. Four digits 1442 = - 36 - 9 - 4 - 4 - 5 + 0 + 1500
2. Four digits 2495 = 5 + 61 + 0 + 0 + 2163 + 265 + 21 - 20
3. Four digits 7030 = - 3 + 6944 - 50 + 150 + 0 - 5 - 6
4. Four digits 7408 = 10 + 0 + 2163 + 26 + 5212 + 0 - 3
5. Four digits 3823 = - 694 + 4501 + 5 + 0 + 0 + 5 + 6
6. Four digits 2163 = - 1 + 0 + 0 + 2163 - 2 + 6 - 5 + 2
7. Four digits 8310 = 120 + 3694 + 4501 - 5 + 0 + 0
8. Four digits 7801 = 5 + 6100 + 2 + 1632 + 65 - 2 + 1 - 2 + 0

Our job must be to discover two-linking numbers which will tie the first digit of each underlined group to the first digit that comes after the equal sign.

The first digit of the first group (digit number ONE of the square root of three) goes with digit number ONE of the psalm-heading's twenty-seven digits.

The first digit of the second group (digit number FIVE of the cube root of three) goes with digit number TWELVE of the psalm-heading's twenty-seven digits.

The first digit of the third group (digit number NINE of the cube root of three) goes with digit number ONE of the psalm-heading's twenty-seven digits.

The first digit of the fourth group (digit number THIRTEEN of the cube root of three) goes with digit number FOURTEEN of the psalm-heading's twenty-seven digits.

The first digit of the fifth group (digit number SEVENTEEN of the cube root of three) goes with digit number TWO of the psalm-heading's twenty-seven digits.

The first digit of the sixth group (digit number TWENTY-ONE of the cube root of three) goes with digit number FOURTEEN of the psalm-heading's twenty-seven digits.

The first digit of the seventh group (digit number TWENTY-FIVE of the cube root of three) goes with digit number TWENTY-FIVE of the psalm-heading's twenty-seven digits.

The first digit of the eighth group (digit number TWENTY-NINE of the cube root of three) goes with digit number TWELVE of the psalm-heading's twenty-seven digits.

Let's tie the eight pairs of digit-numbers together to make eight 'two-linking' numbers.

1. 11 denotes that ONE goes with ONE.
3. 512 denotes that FIVE goes with TWELVE.
3. 91 denotes that NINE goes with ONE.
4. 1314 denotes that THIRTEEN goes with FOURTEEN.
5. 172 denotes that SEVENTEEN goes with TWO.
6. 2114 denotes that TWENTY-ONE goes with FOURTEEN.
7. 2525 denotes that TWENTY-FIVE goes with TWENTY-FIVE.
8. 2912 denotes that TWENTY-NINE goes with TWELVE.

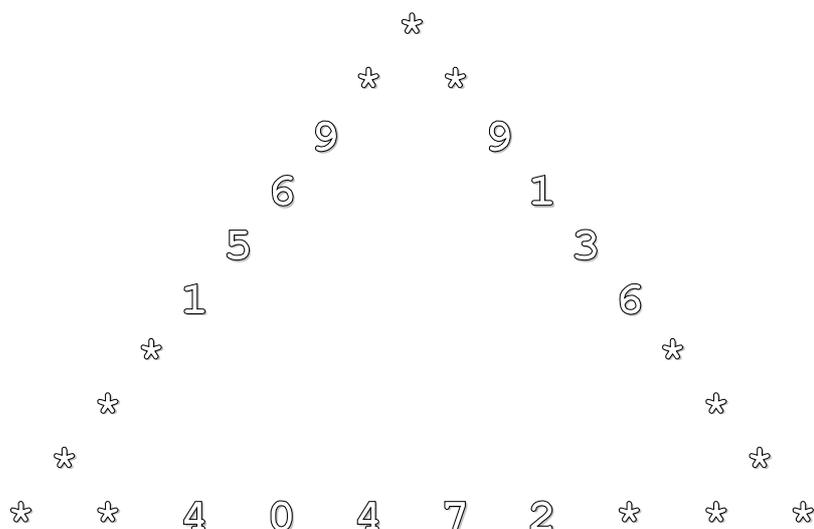
What happens when we add up all eight of these 'two-linking' numbers?

$$11 + 512 + 91 + 1314 + 172 + 2114 + 2525 + 2912 = 9651$$

The eight groups add up to 40472.

The title total is 9136, or 2284 x 4, because all twenty-seven digits of the title are used FOUR times.

So we have a two-linking total of 9651, a title total of 9136, and a groups total of 40472. Let's display those three facts in a triangle.



The two-linking total is 9651.

The title-total is 9136.

When you add the two-linking total 9651 to the title-total 9136, you get 18787.

Look at the groups total 40472.

Interpret the 4047 bit as [40 + 47 = 87], and the 2 bit as 'a SECOND eighty-seven'.

Then say, 'One 87 followed by a second 87', and you have the number 18787.

'I wish you would come to your senses,' says Colin Tate. 'All you're doing is juggling with numbers. If I allowed myself to work in that way, I could turn ANY NUMBER into ANY OTHER NUMBER.'

'Could you really?' says Delia. 'Maybe you'll allow us to put your claim to the test.' She opens a volume of Poe, and begins to write on a sheet of lined paper. After less than a minute, she hands the sheet to Colin Tate.

| | | | |
|------|-------|------|-----|
| Turn | 63521 | into | 234 |
| Turn | 44393 | into | 341 |
| Turn | 23623 | into | 432 |
| Turn | 44364 | into | 172 |

'That's not what I meant,' splutters Colin Tate.

'Then what *did* you mean?' asks Delia frigidly. 'You said that if you allowed yourself to work in a particular way, you could turn ANY NUMBER into ANY OTHER NUMBER.'

Colin Tate displays his ability to turn five into four. He leaves.

Five, four, three, two! Let's do the cube root of two before we go out for dinner.

THE CUBE ROOT OF TWO IN PSALM 7

The four-digit cube root of two, 1.260, is accurate enough for many purposes, but the heading of Psalm 7 encodes a value for the cube root of two which runs to *thirty-two digits*.

1.259 9210 498 9487 316 4767 210 6072 782

To see the number of letters in each group, we must read the psalm-heading backward.....

369 44 501 500 56 100 216 326 52 120

.....so as to represent words *two* and *three* respectively as 44 and 105.

44 is construed plainly as 44, while 105 is construed as 34 + 34 + 34 + 3, so we have two mirror-image groups of digits.

4 4 3 4 3 4 3 4 3

David uses these nine large-font digits to create a template for his arrangement of ALL THIRTY-TWO DIGITS of the cube root of two.

The nine sets contain respectively 4, 4, 3, 4, 3, 4, 3, 4, and 3 digits.

David divides the thirty-two digits into the following NINE groups. The nine groups add up to 32601.

1259 9210 498 9487 316 4767 210 6072 782

Once the eight groups are constituted, David takes the twenty-seven digits of the heading's gematric values.....

369 44 501 500 56 100 216 326 52 120

.....and puts them to work.

1. Four digits 1259 = 369 + 44 + 500 + 501 - 56 - 100 + 2 - 1
2. Four digits 9210 = 63 - 265 + 2 - 1 + 2 + 0 - 36 + 9445 + 0
3. Three digits 498 = -1 + 500 + 5 - 6
4. Four digits 9487 = 10021 + 6 - 3 - 2 + 6 - 521 - 20
5. Three digits 316 = 369 - 44 - 5 + 0 + 1 - 5 + 0 + 0
6. Four digits 4767 = 5 - 6 - 100 - 2 - 16 - 326 + 5212 + 0
7. Three digits 210 = 3 + 6 + 9 - 4 - 4 + 50 + 150 + 0
8. Four digits 6072 = - 5 + 6100 - 2 - 16 - 3 - 2
9. Three digits 782 = 652 + 120 + 3 + 6 + 9 - 4 - 4

Our job must be to discover two-linking numbers which will tie the first digit of each underlined group to the first digit that comes after the equal sign.

The first digit of the first group (digit number ONE of the cube root of two) goes with digit number ONE of the psalm-heading's twenty-seven digits.

The first digit of the second group (digit number FIVE of the cube root of two) goes with digit number NINETEEN of the psalm-heading's twenty-seven digits.

The first digit of the third group (digit number NINE of the cube root of two) goes with digit number EIGHT of the psalm-heading's twenty-seven digits.

The first digit of the fourth group (digit number TWELVE of the cube root of two) goes with digit number FOURTEEN of the psalm-heading's twenty-seven digits.

The first digit of the fifth group (digit number SIXTEEN of the cube root of two) goes with digit number ONE of the psalm-heading's twenty-seven digits.

The first digit of the sixth group (digit number NINETEEN of the cube root of two) goes with digit number TWELVE of the psalm-heading's twenty-seven digits.

The first digit of the seventh group (digit number TWENTY-THREE of the cube root of two) goes with digit number ONE of the psalm-heading's twenty-seven digits.

The first digit of the eighth group (digit number TWENTY-SIX of the cube root of two) goes with digit number TWELVE of the psalm-heading's twenty-seven digits.

The first digit of the ninth group (digit number THIRTY of the cube root of two) goes with digit number TWENTY-TWO of the psalm-heading's twenty-seven digits.

Let's tie the ten pairs of digit-numbers together to make ten two-linking numbers.

1. 11 denotes that ONE goes with ONE.
3. 519 denotes that FIVE goes with NINETEEN.
3. 98 denotes that NINE goes with EIGHT.
4. 1214 denotes that TWELVE goes with FOURTEEN.
5. 161 denotes that SIXTEEN goes with ONE.
6. 1912 denotes that NINETEEN goes with TWELVE.
7. 231 denotes that TWENTY-THREE goes with ONE.
8. 2612 denotes that TWENTY-SIX goes with TWELVE.
9. 3022 denotes that THIRTY goes with TWENTY-TWO.

What happens when we add up all nine of these two-linking numbers?

$$11 + 519 + 98 + 1214 + 161 + 1912 + 231 + 2612 + 3022 = 9780$$

The eight groups add up to 32601.

The title total is 9549, or $[2284 \times 4] + 369 + 44$, because all twenty-seven digits of the title are used FOUR times, and the first five digits of the title, which derive from its first two words, are used for a FIFTH time.

$$2284 + 2284 + 2284 + 2284 + 369 + 44 = 9549$$

You remember how the heading of Psalm 7 runs in Hebrew.

שגיון לדוד אשר-שר ליהוה על-דברי-כוש בן-ימיני

(= Shiggaion of David, which he sang unto the LORD,
concerning the words of Cush the Benjamite).

The first or rightmost word of the heading is

שגיון

shin-gimel-yodh-wau-nun (= Shiggaion: 400 gematric value of 369),

and the next word is

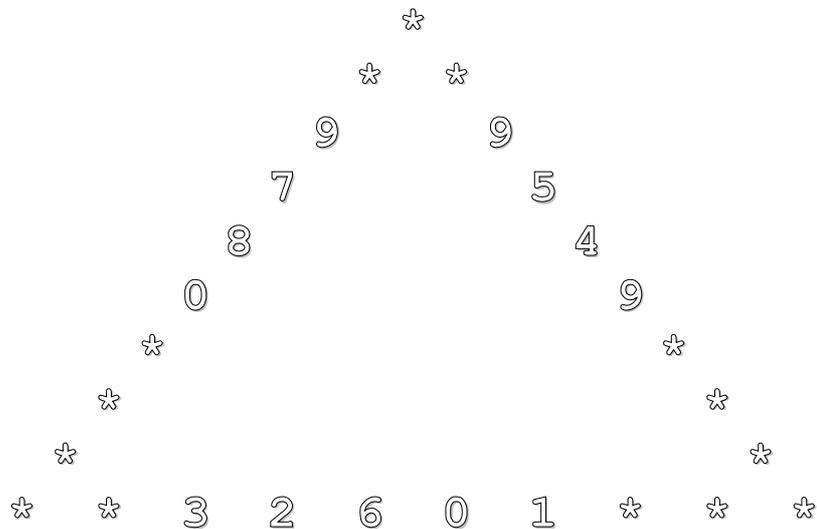
לדוד

lamedh-daleth-wau-daleth (= of David: 400 gematric value of 44).

Happy enough? Then we'll hasten to the close.

We have a two-linking total of 9780, a title total of 9549, and a groups total of 32601.

Let us display those three facts in a triangle.



The two-linking total is 9780, and the title-total is 9549.

When you subtract 9549 from 9780, you get 231.

Look at the groups total 32601.

Read its digits backwards as $[106 \times 2] + 3$ to get 215.

The second, first, and fifth digits of 32601 concatenate to give 231.

‘That’s clear enough,’ says Rosie. (Colin Tate is no longer here to complain.)

‘So it is,’ says Delia. ‘And some day an archaeologist may dig up a stone tablet that confirms what we have found out today. But in the meantime, we must dig in the text.’ She pauses. ‘I’ve noticed something that unifies *all our findings*.’

‘Do you mean all four of David’s roots?’ you ask.

‘Yes!’ Delia replies. ‘Listen. When you turn the Hebrew words of the title into 400 gematria, you get twenty-seven digits.’ She pauses. ‘Now the square root of two uses four runs of the title, or *one hundred and eight digits*. The square root of three uses five runs of the title, or *one hundred and thirty-five digits*. The cube root of two uses four runs of the title, or *one hundred and eight digits*. And the cube root of two uses four runs of the title plus the five digits of the first two words, which makes *one hundred and thirteen digits*. How many title-digits are used altogether?’

‘Four hundred and sixty-four,’ says Rosie.

‘Correct,’ says Miss Benn. ‘Look.’ She points to an equation on her note-pad.

$$108 + 135 + 108 + 113 = 464$$

‘In Hebrew the name of David is spelled da-leth-wau-da-leth,’ Delia continues. ‘David’s name uses letters FOUR, SIX, and FOUR of the Hebrew alphabet.’ She smiles entrancingly. ‘I reckon that we have an authorial signature here.’

(The doorbell sounds. An art student called Julia Arden wants to paint twelve instruments from my collection! She gives me a list: valve trombone, auloi, Mongolian fiddle, lyra viol, quintern, bass gemshorn, guitar, vielle, bombarde, crwth, panpipe, and Aeolian wire harp. I tell her that she can borrow one instrument at a time. Julia goes on her way, bearing a valve trombone. Out in the street two children scream as a man emerges from his car. Prof. Peneus Stavanger, retired educationist and author of *The Itchen Test*, has come to visit old Mrs Herring, the local piano teacher. ‘Joke over,’ the man growls grimly.)

Now let me address all my readers in connection with a matter of some gravity. Having eaten nothing but grapes and a chocolate bar since breakfast, *I am starving*. Furthermore, there’s a really excellent Chinese buffet restaurant in the coastal town of Bangor, half an hour’s drive away. As Duane and Martha Christensen could tell you, the spring rolls, the mussels, and the roast duck that you get in that restaurant deserve to be celebrated in verse. If you ever come to visit me in Northern Ireland, I promise to take you there. For the present, I’m going to drive my three interlocutors to Bangor. You can listen to our mad and merry conversation if you want.

‘I’d love to cleave Colin Tate’s head with a hatchet,’ says Rosie. ‘Is there any reason why a poet shouldn’t put square roots in his song?’

No reason. What we may call the vulgar doctrine of Parnassian Grundyism is founded upon a comprehensive ignorance of literature. I mean to say, Vergil wrote a textbook about farming *in Latin verse*, Jacob Cats wrote a textbook about maidenly duties *in Dutch verse*, and Martin Agricola wrote a textbook about musical instruments *in German verse*.

‘You must never presume to tell poets what they should write about,’ says Delia. ‘When you describe a technical subject as *unpoetic*, you’re really demanding that poets do their work in accordance with your own ignorant notions.’

‘Correct,’ says Rosie. ‘People who *can’t* write verse shouldn’t try to tell people who *can* write verse what sort of verse they mustn’t write.’

‘If we allow certain wretched poets to be metaphysical,’ you declare, ‘we should allow other poets to be mathematical.’

‘Sophia Kovalevskaya might have agreed with you, dear,’ says Rosie. ‘She once wrote, *It is impossible to be a mathematician without having the soul of a poet.*’

I suddenly remember a dictum of Pushkin, and quote it.

Вдохновение нужно в геометрии, как и в поэзии

(= Inspiration is necessary in geometry, even as in poetry).

‘That’s true,’ says Delia. She pauses. ‘Colin Tate reminds me of Lin Chi’s famous warning. *When you meet a master swordsman, show him your sword. When you meet a man who is not a poet, do not show him your poem.*’

Wise counsel! It still angers me to recall how the verbose editor of a British journal once chose to write about the noticeably stilted English of a Russian

contributor. By describing the contributor's English as 'almost poetical', the editor revealed that he himself knew NOTHING about poetry.

'That editor sounds like one of *the sons of ignorance*,' says Rosie.

'What poet are *you* quoting, dear?' asks Delia.

'Thomas Binney,' Rosie replies.

'*Ignorance never settles a question*,' you declare. 'Who said that?'

I don't know.

'Benjamin Disraeli,' you say.

'Oooohhhh,' says Delia. '*Benjamin*. I forgot to tell you.' She gyrates wildly in her seat like a tarantula victim. 'Listen, ye adepts. David talks about a man called *Cush* in the heading of Psalm 7. What do we know about Cush?'

'He was a Benjamite,' you say.

'Correct.' Delia inhales slowly. 'Two English words -- *the Benjamite* -- render the last two Hebrew words of the psalm-heading: beth-nun, and yodh-mem-yodh-nun-yodh. What do those two Hebrew words add up to in 400 gematria?'

'Let me think,' says Rosie. 'One hundred and seventy-two. Is that right?'

'Yes, it is, and the number has a *meaning*,' says Delia. 'Think back to the psalm-heading. How many times is it used altogether? Four complete runs for the square root of two. Five complete runs for the square root of three. Four complete runs for the cube root of three. And for the cube root of two, four complete runs, PLUS THE FIRST TWO WORDS.' She pauses. 'I make that seventeen complete runs, plus two words. How may we represent seventeen plus two? By using the number one-seven-two. Hence *the Benjamite*.'

'Well done!' says Rosie. 'That is *really* smart, Delia.'

'So it is,' you say. 'And it was really smart of David to put his four square roots in what he knew would become part of the national hymn-book.' You pause. '*Aere perennius*. More enduring than bronze.'

Your quotation from Horace causes me to recall two lines of Du Fu.

孔 明 廟 前 有 老 柏

(= Beside the Temple of the Great Ming stands an ancient cypress:)

柯 如 青 銅 根 如 石

(= Its trunk is of green bronze: its root is of stone).

Ten minutes later, as we pass a venerable tree on our way into Bangor, I think of Du Fu's ancient cypress once again. In the same moment Delia quotes and translates one line from a Romani poem by Tera Fabiánová.

pre dvora hin phuri pendeč – o prajta želena.....

(= in the yard is an old walnut tree: its leaves are green).

Then she leads us into a mad-scene operatic quartet.

'A certain British company with *Shakespeare* in its title is the agency of Satan himself,' says Miss Benn.

'I reckon that Ella Wheeler Wilcox and Emily Dickinson are unworthy of serious study,' you say.

I know a man, I lie not, who regards Franz Kafka, James Joyce, and Samuel Beckett as charlatans. That man refuses to have their hellish books in his home.

'Let me speak with moderation,' says Rosie. 'I have read the works of Charles Darwin and Erich von Däniken without pleasure.'

'I detest the modern obsession with fractals,' says Delia.

'I cannot endure people who talk incessantly about Möbius strips,' you say.

I don't know why the world makes such a fuss about M C Escher.

'I think that Max Ehrmann's "Desiderata" should be publicly burned,' says Rosie.

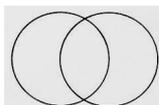
'The Sieve of Eratosthenes,' says Delia, 'is a pompously named piece of *infantility*.'

'I cannot tolerate the music of Thor Vanner and Jethro Junter,' you say.

When people talk about Occam's Razor, I start practising the didgeridoo.

'When anyone tries to show me a card trick,' Rosie says, 'I leave the room.'

'And I leave the room,' says Delia, 'when anyone mentions the utterly useless *vesica piscis*, or fish-bladder, in which two circles having the same radius intersect so that the centre of each circle lies on the circumference of the other.' She breathes over the windscreen, and draws on the mist with one finger.



'Hey, be careful with that one,' you say. 'The distance between the two points of intersection, divided by the length of the common radius, gives you 1.732, the square root of three.'

Maybe you're right, Sad Boy. But that is a perfectly horrendous way to get 1.732.

Delia, dear! Clean the windscreen before I strangle you. Let's forget about decimal points, and think for a while in terms of 800 Greek gematria.

If you want the square root of three, remember the ten-letter word which the Lord Jesus uses in Luke 17. 7: APOTPIΩNTA (= plowing).

alpha-rho-omicron-tau-rho-iota-omega-nu-tau-alpha
 $1 + 100 + 70 + 300 + 100 + 10 + 800 + 50 + 300 + 1 = 1732$

If you want the cube root of three, remember the ten-letter word which the Lord Jesus uses in Revelation 2. 14: KPATOYNTAΣ (= them that hold).

kappa-rho-alpha-tau-omicron-upsilon-nu-tau-alpha-sigma
 $20 + 100 + 1 + 300 + 70 + 400 + 50 + 300 + 1 + 200 = 1442$

If you want the cube root of two, remember the five-letter word which the Lord Jesus uses in Matthew 18. 16: TPIΩN (= three).

tau-rho-iota-omega-nu
 $300 + 100 + 10 + 800 + 50 = 1260$

If you want the square root of two, remember the eight-letter word which the Lord Jesus uses in Matthew 18. 3: ΣΤΡΑΦΗΤΕ (= ye be converted).

sigma-tau-rho-alpha-phi-eta-tau-epsilon
 $200 + 300 + 100 + 1 + 500 + 8 + 300 + 5 = 1414$

Now listen to the piece of nonsense that I found in a magazine last Friday.

In 1996, a crop circle in the shape of the vesica piscis appeared in England [note the marvellous geographical precision]. Anyone stepping into the inner portion of the intersecting circles could feel a sudden rush of energy.

Bah! What did the cerealogists do with their free energy? When you jump into a cold mountain lake you feel a sudden rush of energy. When you get out you're cleaner than you were before, and you want to run. Be robust, avoid meaningless geometry, and leave fools to their folly. The Lord's four Greek words may be arranged to form a figure which will serve you much better than the *vesica piscis*.

| | | | | | | |
|---|--|---|---|---|---|---|
| | | Σ | | T | | |
| | | A | P | O | T | P |
| | | I | Ω | N | T | A |
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| T | | | | | | A |
| | | K | P | A | T | O |
| | | Y | N | T | A | Σ |
| | | H | | Φ | | |

Here we are in Bangor, whose monastery was once renowned all over Europe for its learning. And here tonight Miss Benn is pleased to perform a memorable

intellectual feat at the dinner-table. After drawing twelve numbers from the fountain of her memory, she begins to write on a paper napkin.

Two-linking totals of the four roots: 14295, 12949, 9651, 9780
 Sum of the four two-linking totals: 46675
 Title totals of the four roots: 9136, 11420, 9136, 9549
 Sum of the four title totals: 39241
 Group totals of the four roots: 4799, 35156, 40472, 32601
 Sum of the four group totals: 113028

$46675 + 39241 = 85,916$, and $[113 - 028] = 85 = [91 - 6]$

‘I wish I could do that sort of mathematical work in my head,’ you say.

So do I! Delia has brought to light a sublimely elegant mnemonic. I feel useless.

‘Don’t worry about it, dear,’ says Miss Benn magnificently. ‘See if you can add up all the digits in the triangle.’

Well, I add up like mad, but Rosie gets there before me. ‘Sixty-two!’ she cries.

‘That’s right,’ says Delia. ‘And in 22 Hebrew gematria, sixty-two is the numerical value of the word shin-resch-shin. What does that Hebrew word mean?’

Root.

‘Well done,’ says Miss Benn. ‘And now *tecpeitsukigisa*, as it says in the old Greenlandic song. Let us rejoice.’ She takes up her chopsticks. ‘What I really mean is, let us all eat prodigiously. Then we can talk about equal temperament.’

In chapter 19 Delia will derive the number 198944 (= 46675 + 39241 + 113028) from the name of Cush. 198944 may be seen as embracing everything that David has to say about the square and cube roots of two and three. For the present, ask yourself if a mnemonic is concealed in the two equations which follow.

$$198944 = [58^3 + 58^2 + 20^2 + 4^3 + 4], \text{ and } [58^3 + 58^2 + 20^2 + 4^3 + 4] = 1414$$

Now must I these three praise. The beautiful Cicely Grove has come over to join us! Cicely is an art student and a virtuoso player of the conch. Archdeacon Blane calls her ‘La Stupenda’. Last year Cicely modelled for a local painter as

The Tritoness. Two tables away sits Peg Legge, the art critic of an obscure feminist broadsheet. Peg once described Cicely's portrayer as a disciple of C John Taylor. (The disciple felt honoured to be named along with an artist whom he frankly respects.) One table away, old Mrs Thrett is glaring at Delia's befigured napkin. 'They are all *occultists*, Herbing,' she growls to her husband.

Ha, ha, ha! Some people can see only what they want to see, and hereby hangs a picture. Last year Rosie incorporated a famous Burmese poem in one of her paintings. The said poem may be rendered as follows.

From the tree-clad foothills of the Meza mountain-range, around which a river flows continually, my reluctant heart reaches out to Golden City.

Rosie's unusual painting was purchased by Signor Ciarlatano, the celebrated homeopath. A few minutes after the sale, Miss Stone was amazed to hear Signor Ciarlatano interpreting her calligraphy for the benefit of his two aunts.

မဲဇာ တောင်ခြေ
စိး တွေ့တွေ့ရတည်၊ မြစ်ရေ ဝန်းလည်
ရှေ့ပြည်ကိုဘဝ၊ တရှာတောမိ။

'All three lines are written in the magical Enochian script,' he declared. 'The first line means, *Dr John Dee*. The second line means, *an encyclopedia [published in] Leiden, obscured*. The third line means, *Egyptological cosmography*.'

Don't imagine that Signor Ciarlatano is uniquely perverse. Imagine instead that some well-meaning Christian girl enrolls in a Bible college, and finds herself having to read the two consecutive sentences of hybrid language which follow. [The sentences are taken from D J A Clines, 'Psalm research since 1965: II. The Literary Genres', in *Tyndale Bulletin* 20 (1969), 108].

The fourth seems curiously out of place, since it hardly forms a literary genre, as Weiser himself admits; its presence among the other *Gattungen* can only be explained by its connection with the covenant and the *Heilsgeschichte*, but it is really a *topos* rather than a *Gattung*.

The commentary of A. Deissler is a modification of the Gunkelian schema by an adherent of the 'anthological' school.

The Burmese poet speaks of a mountain-range, a river, and a city. Signor Ciarlatano talks about an encyclopedia and cosmography. After mentioning *mountains*, the author of Psalm 46 speaks of *a river, the streams whereof shall make glad the city of God*. In a publication which purports to help readers of the Psalms, D J A Clines talks about a *topos*, a *Gattung*, the *Heilsgeschichte*, and the Gunkelian schema. What would the faithful martyr William Tyndale have to say about the obscure cosmography of modern scholarship? *There was a darke myst vppo all the lande off Egipte*. Alas! Let us end chapter 13 on a clear note.

I can plant, you can water, but God giveth the increase. Why is the Lord Jesus Christ the root of David? Because he is the exponential principle of growth. It is he who causes the crystal and the zygote to grow. Of the increase of his government and peace there shall be no end, upon the throne of David. Where two or three are gathered together in his name, there he is in the midst of them, working away expansively at the very root of their individual and communal lives.

CHAPTER 14: MY DARK SAYING UPON THE HARP

There must have been tulip and violet, lilac and rose.....

Clarissa Bucklin, 'White Flowers'

Early next morning we meet in Miss Benn's garden pavilion, which is known to her Indian friends as the Rai Praveen Mahal. Outside the window you can see what the Latvian writer Amanda Aizpuriete calls *violetu tulpju straume* (= a stream of violet tulips). Four gorse-trunks are burning in the little slate fireplace. Two enormous brass kylins stand on the hearth. Each one seems to say NEMO ME IMPUNE CIRCUMMESSAT. Delia bought the kylins last year from a Chinese antique dealer who commended them to her in unforgettable words. *These powerful beasts will bring you good fortune and help you to beat down the evil.*

'I'm still in a state of shock,' says Rosie. 'Tell us something, Delia. How were you able to pull that miraculous equation out of a hat last night?'

'I didn't pull it *out of a hat*, dear,' replies Miss Benn, 'and it wasn't miraculous.' She walks over to the door, and lets in Colin Tate. 'You see, I knew exactly what I was looking for.' Delia pauses. 'I merely added up three sets of numbers, and looked to see if the three totals related to each other in a particular way.'

DINOSAURS, A DANCER, AND THE LORD'S PRAYER

Late last night you wrestled with a giant crossword, and prevailed. Even the two hardest clues -- *No toreador can digest this dude* (3-3-3-6-3-9), and *End aid shot to flourish indeed* (3-9-4-2-3-5) -- submitted to you. Why? Because you knew that the crossword had to do with 'giants in the earth'.

Imagine that once upon a time a bad-boy student who was very familiar with the Bible didn't prepare properly for an examination in Old Church Slavonic. One phrase in the passage set for translation might have been counted by that student as a great blessing: дъшти Иродъядина (= the daughter of Herodias). Proper nouns can be very helpful. You may not know a single word of Malagasy, but if you know the Bible well you'll be able to translate the sentence that follows. *Izay any Babylona, voafidy ho namanareo, manao veloma anareo, ary Marka zanako koa.* And you may not know a single word of Manx, but if you know the Bible well you'll be able to translate the sentence that follows. *Agh er y laa v'er ny reayll corrym rish y laa ruggyr Herod, ghaunse inneen Herodias ayns yn enish oc, as ghow Herod lane boggey j'ee.* By contrast, if you're in Papua New Guinea and you read the Tok Pisin sentence *Nem bilong yu i mas i stap holi*, you may not perceive at once that it means *Hallowed be thy name.*

Here is an important principle of cryptanalysis: it helps when you know what you're looking for. Two Yaghnobi words from a famous tale about Nasreddin (yxш тангаи = six shillings) were once chalked on the wall of a derelict building in Khujand. 'Word one, three letters; word two, six letters,' said a passing agent. Minutes later he typed the number 1326 into the keypad of a digital door-lock.

Three more examples! Number ONE. At midnight a spy whose codename is Phaethon drives home in his Lamborghini Murciélago to find that the enemy

archregent has visited his study, taken away a number of important documents, and left a floridly derisive greeting on the window-ledge.

MEN DO FORGET, PHAETHON! 

Number TWO is the name of a sinister figure.

GLEJJ VON QWEMB

Number THREE will be familiar to certain readers who took part years ago in a highly charged training course. A young American agent is called Mr Housman, and he bears the codename AE. (A E Housman was a famous British classicist and poet.) AE's chief is called Miss Heffer, and she bears the codename IO. (Io was a mythical priestess whom Zeus turned into a heifer.) During a period of severe oil shortage, the New York mobsters make a fortune by siphoning fuel from the tanks of parked cars. AE is instructed by IO to infiltrate the mob and find out who is in charge of the gas-siphoning racket.

After winning the trust of the mobsters, AE falls in love with Olimpia, the daughter of a leading Mafiosa. Olimpia is a fashion model by day, and an animal rights activist by night. She persuades AE to join her in making a protest against the Faroese National Circus, which is presently touring New York State. So besotted is AE with Olimpia that he agrees to write an Angry Letter, under his own real name, to one of the New York newspapers. In the letter he denounces a dance-routine involving seals which has moved his beloved to tears. When AE's letter is published, it is read by his chief. IO is both amused and annoyed. She informs AE in a coded message that not many people are worried about seals having to dance. IO advises AE to get on with investigating the Mafia gas-siphoning racket. Here is the message.

AE:
ABCDEFGHIJKLMN OPQRSTUVWXYZ.
IO

IO's message is a 'pangram' (a sentence in which every letter of the alphabet appears at least once). Since AE has been rigorously trained in the use of pangrams, he is able to decode IO's message in a few minutes. But Mr Housman has already decided to give up his secret work. He confesses to Olimpia that he is a government agent.

'I know, *angelo mio*,' she says. 'and I don't care! *Perché?* Because you have proved that you want to protect *le foche*, the seals. Now let me think. *Per buona fortuna*, I can put my hands *direttamente* on twenty million dollars. We must both run for our lives. *Andiamo!*'

The two lovers drive discreetly to Mexico in Olimpia's Fiat limousine. After getting married in Tijuana, they make their way to Greenland, settle in Angmagssalik, watch over the local seals, and live rapturously ever after.

Let me turn with reluctance from that truly beautiful story in order to repeat eight words which were spoken by Delia a short time ago.

I knew exactly what I was looking for.

We've seen three cryptograms which cannot be solved without special knowledge.

MEN DO FORGET, PHAETHON!

GLEJJ VON QWEMB

AE: ABCDEFGHIJKLMNOPQRSTUVWXYZ. IO

'I wonder if you're right,' says Colin Tate the commentator. 'None of the three cryptograms is what you'd call *long*. Number three does contain thirty letters, but number one contains only nineteen letters, and number two contains only thirteen letters.' He pauses. 'Let me work at those three cryptograms for a couple of hours.'

'All right,' says Delia. 'We four can go and play tennis.'

Without delay Dr Tate addresses himself to Number One.

MEN DO FORGET, PHAETHON!

He believes that the message is an anagram, but he has no *setting* to work in. Colin doesn't know who the visitor is, and he doesn't know that the visitor has a *nom de guerre*. His first solution reads like another cryptogram.

DEATH, FROGMEN, HOPE NOT!

His second solution is much more sensible.

DON'T GO, FATHER, PHONE ME!

Colin moves on to Number Two.

GLEJJ VON QWEMB

After a few minutes he decides that Glejj von Qwemb is not an anagram, but a collection of initials. What persons are denoted by these initials? Most likely, Colin ventures to say, thirteen novelists whose surnames are familiar to us all.

GASKELL LEWIS ELIOT JAMES JEROME VERNON ORWELL NABOKOV

QUILLER-COUCH WODEHOUSE ENRIGHT MAUGHAM BUCHAN

It remains for Colin to solve Number Three.

AE: ABCDEFGHIJKLMNOPQRSTUVWXYZ. IO

There must be *second-level codenames* here, he tells himself. Furthermore, the codenames of sender and recipient will probably display some kind of kinship. While he stares at the thirty letters of the message, Colin searches his own mind diligently. At length he comes up with two names from a television serial drama which his sister used to watch: VAMP and JINX. So far, so good. Next thing is to find the name of the enemy, most likely an evil character like Dr Fu Manchu who spreads his tentacles over the whole civilized world. Of course: SQUID! What is SQUID's real name? Well, it almost certainly begins with the letter H, because

the bound-to-be-right word ZYGAL means ‘H-shaped’. Eighteen letters used up! The rest of the cryptogram solves itself in plausible fashion as a radiant Delia opens the door.

‘We four are now well-exercised, showered, reclothed, and in our right minds,’ says Miss Benn. ‘Do you want to bring your solutions over to the house, Colin? Rosie has prepared a frugal breakfast of green tea and grapes.’

Let us examine Colin’s three acknowledged solutions one by one.

MEN DO FORGET, PHAETHON! DON’T GO, FATHER, PHONE ME!

‘FATHER is the addressee’s codename,’ Colin explains. ‘DON’T GO means *Don’t go to your superiors*. PHONE ME means *deal with me personally*.’

Working in almost complete darkness, Dr Tate has done a really excellent piece of work.

‘Thanks,’ says Colin. ‘What’s the real answer?’

One that might never be guessed by an outsider. You see, the intelligence officer in Number One already knows his arch-enemy’s *nom de guerre*.

MEN DO FORGET, PHAETHON! THE PENTANDER OF GHOOM

Nom d’horreur! The terrified Phaethon to whom that message is addressed is well able to rearrange its nineteen letters.

Now look at Colin’s decryption of Number Two.

GLEJJ VON QWEMB

GASKELL LEWIS ELIOT JAMES JEROME VERNON ORWELL NABOKOV

QUILLER-COUCH WODEHOUSE ENRIGHT MAUGHAM BUCHAN

Who is GLEJJ VON QWEMB? Is he a brother of the Count von Kramm who comes to see Sherlock Holmes? No. Is he a cousin of Crème Brûlée, who served Alfred the Great as *chef de cuisine*? No. Then is he a nephew of the French painter Albert Gleizes? No. Only a diligent peruser of *THE LORD SHALL COUNT* will be able to identify GLEJJ VON QWEMB. His name comprises the initials of six writers who appear together in chapter 1. The careful reader of Number Two will notice that GLEJJ VON QWEMB is called ‘a sinister figure’, and that his name contains *thirteen letters*. Before long the careful reader will remember the thirteen-letter groups of chapter 1. In time he or she will be drawn to look at the thirteen initials of Eugenio Montale, Johann Wolfgang von Goethe, Odysseus Elitis, Nazir Qabbani, Jeremiah, and Li Bai.

Colin deserves credit for working out that GLEJJ VON QWEMB’s name consisted of initials, and for coming up with thirteen surnames which he has often seen in public libraries.

Now we’ll look at Dr Tate’s solution to Number Three.

**AE: ABCDEFGHIJKLMNOPQRSTUVWXYZ. IO
VAMP: ROCK THE WEB OF ZYGAL SQUID. JINX**

Well! It's good up to a point, Colin, but it isn't specific enough. I told you what IO said in her message: not many people are worried about seals having to dance, and AE should get on with investigating the Mafia gas-siphoning racket. The agent in Number Three knows that his chief is likely to reprove him for protesting in public about seal-dancers. He doesn't look for the word *seal*, because the employment of that one-syllable word in a thirty-letter pangram would represent a prodigal use of vowels. (The Q is going to use up both the only available U and one other vowel.) AE eventually goes for the two-syllable word PHOCAL (from Latin *phoca* = seal), which is known only to classically educated persons like IO and himself.

Does he go on to look for the word *dance*? No! As with the word *seal*, the employment of that one-syllable word in a thirty-letter pangram would represent a prodigal use of vowels. The same applies to words like mazurek, minuet, pavane, polonaise, and tango. *Waltz* would be an excellent candidate, but the only available L is the last letter of PHOCAL. What then? Of course! IO must have used the word JIGS. Next, realizing that the pangram contains two Os, AE extracts the word MOB. Already he has accounted for thirteen out of thirty letters. Before long he decodes the whole message.

AE: ABCDEFGHIJKLMNOPQRSTUVWXYZ. IO
PHOCAL JIGS VEX FEW: QUIZ DRY TANK MOB.

'Colin's message was a lot more memorable than yours,' says Rosie.

Oh, I know! Phocal jigs are feeble things, but Zygol Squid deserves to have a whole series of books written about him. (ZYGAL SQUID AND THE THREE HOSTAGES. ZYGAL SQUID AND THE FOUR JUST MEN. ZYGAL SQUID AND THE FIVE RED HERRINGS. ZYGAL SQUID AND THE SIX NAPOLEONS. ZYGAL SQUID AND THE SEVEN DIALS.) We may observe in passing that the inclusion of a number in the title of a tale helps us to remember both the title and the tale.

Delia rises to her feet, closes her eyes, and recites a freshly composed quatrain.

'The time has come to lift the lid
On what the young Pentander did:
He quizzed a Qwemb in dry Madrid,
And rocked the web of Zygol Squid.'

That was marvellous, dear. Now we'll go back to the three messages and observe an important fact. In every case, a cryptanalyst must be aware of the SETTING in which a particular message is meant to be read.

'To some extent, the same goes for a lot of uncryptical creative literature,' says Rosie. 'I mean, when an author writes about some specific matter, he expects his readers to know what he's talking about.'

'That's right,' you say. 'When Pushkin tells us in *Eugene Onegin* that Lensky plays on the clavichord, he expects us to know what a clavichord is.'

'Or to go and find out, if we *don't* know,' says Rosie.

Yes! And when John Buchan tells us in *The Blanket of the Dark* that Sabine plays on the clavicytherium, he expects us to know what a clavicytherium is.

'Or to go and find out, if we *don't* know,' says Delia.

Here's a rule. When we read a piece of literature which refers to musical matters, we need to know what the author is talking about.

'Or to go and find out, if we *don't* know,' you say.

Correct. Let me set down a few examples.

In *Romeo and Juliet* IV. v, Peter addresses three musicians as Hugh Rebeck, James Soundpost, and Simon Catling. Shakespeare requires his audience to know that the rebec is a bowed string instrument, that the viol has a soundpost inside its body, and that the catling is an instrumental string which is made from animal gut.

In *Coriolanus* III. ii, the hero imagines his own throat being turned into a pipe 'small as a eunuch'. Shakespeare requires his audience to know that Coriolanus is talking about the musical instrument called 'eunuch', which really is a small pipe. (Coriolanus can't be talking about a castrated human male, since eunuchs are characteristically tall. Here is another fact that the audience needs to know.)

Go back now to the poem by Wang Wei which I quoted in chapter 9.

獨 坐 幽 篁 裡

Among the peaceful bamboos I sit alone.

彈 琴 復 長 嘯

I keep playing the same long flute-like note on my lute.

深 林 人 不 知

The glade is deep. People do not understand.

明 月 來 相 照

The moon sings back to me with clear light.

Wang Wei is plucking a lute-string while touching it lightly with one fingertip at its exact mid-point. By so doing he produces the octave 'harmonic', which really does have a flute-like quality.

There are twenty characters in Wang Wei's poem.

獨坐幽篁裡 彈琴復長嘯 深林人不知 明月來相照

Look at the number of strokes which each character comprises.

16 7 9 15 12 15 12 12 8 15 11 **8 2 4 8** **8 4 8** 9 13

Seven consecutive characters (nos 12, 13, 14, 15, 16, 17, and 18) have stroke-numbers which are BINARY.

Now the place-numbers of all twenty characters add up to 210.

1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 + 19 + 20 = 210

The place-numbers of the seven characters 林人不知明月來 add up to 105.

$$12 + 13 + 14 + 15 + 16 + 17 + 18 = 105$$

105 is exactly half of 210, so in numerical terms the seven characters 林人不知明月來 stand to the whole poem as one stands to two, or as any musical note stands to the note which sounds an octave lower than itself. And that isn't all. The stroke-numbers of the seven characters 林人不知明月來 give us the important musical number 638, in two different ways. We can add up the products of the place-numbers and the stroke-numbers.....

$$[12 \times 8] + [13 \times 2] + [14 \times 4] + [15 \times 8] + [16 \times 8] + [17 \times 4] + [18 \times 8] = 638$$

.....or we can express the stroke-numbers as powers of two (3 1 2 3 3 2 3), and interpret the power-numbers so as to arrive at the same total.

$$312 + 3 + 323 = 638$$

638 is the sum of the unitary string-lengths 162, 144, 128, 108, and 96, which correspond respectively to the notes g'', a'', b'', d'', and e''' – that is, to the five notes of the Chinese pentatonic scale.

$$162 + 144 + 128 + 108 + 96 = 638$$

The last three digits of the stroke-numbers, read backward, give us 319.....

$$16 \ 7 \ 9 \ 15 \ 12 \quad 15 \ 12 \ 12 \ 8 \ 15 \quad 11 \ 8 \ 2 \ 4 \ 8 \quad 8 \ 4 \ 8 \ 9 \ 13$$

.....which is the sum of the unitary string-lengths 81, 72, 64, 54, and 48. These five numbers correspond respectively to the upper-octave notes g''', a''', b''', d''', and e''''.

$$81 + 72 + 64 + 54 + 48 = 319$$

You can sound the highest of these notes, which is represented by the number 48, if you go to a piano keyboard and touch the sixth white key from the top.

Line 3 of Wang Wei's poem contains a warning:

人 不 知 (= People DO NOT UNDERSTAND).

Listen to what the poet says in line 2.

彈 琴 復 長 嘯

(= I keep playing the same long flute-like note on my lute).

There is a musical technicality here. We must take the trouble to *understand* it.

Listen to David.

אלהים שיר חדש אשירה לך בנבל עשור אזמרה-לך

(= I will sing a new song unto thee, O God: upon a psaltery and an instrument of ten strings will I sing praises unto thee).

There is a musical technicality here. We must take the trouble to *understand* it.

Now listen to Tolstoy.

.....в оркестре слышались хроматические
гаммы и аккорды уменьшенной септимы.....

(= chromatic scales and diminished seventh chords were heard in the orchestra).

There are two musical technicalities here. We must take the trouble to *understand* them.

Listen to a fragment of the Ojibwe *Niizhwaaswi Mishoomsag*.

Miidash bezhig Mishoomis gi daapnang dewegaans, miish giingamod

(= Then one of the Elders picked up a drum, and sang).

There is a kind of musical shorthand here. Let me tell you what really happened. The Elder picked up a drum, AND PLAYED ON IT an accompaniment to his own singing. A literal-minded reader may believe that the Elder was content to hold a drum in his hand while he sang, but a musically literate reader will be able to go beyond the simple meaning of the Ojibwe words.

Enough! When laymen try to interpret literary musicalia, they produce nonsense.

'I know,' says Delia. 'In the AV, verse 16 of Psalm 9 ends with two untranslated Hebrew words: *Higgaion. Selah*. Tell us again what those two words mean.'

They mean, *Repeat this verse, accompanying the melody at the lower third*.

'Thanks,' says Miss Benn. 'That makes sense.' She pauses. 'Here's why I asked you, dear. Late last night I was reading a commentary in which the words *Higgaion. Selah* were rendered, *Resounding music! Up!* I laughed in bed for nearly an hour afterwards.'

You did well to laugh. Consider the vulgarized financial expression *put up or shut up*. Only a lover of ugly language will use the verb *put up* intransitively. What sort of person will expect musicians to understand him when he says *Up!?*

Here's another question. Is there any kind of music which does not *resound*? One translation of the Bible talks about *sounding music on the lyre*, and elicits the question: how do you play 'non-sounding music on the lyre'? Another translation talks about *sounding cymbals*, and elicits the question: what are 'non-sounding cymbals'? While we don't deride people who work hard to translate the Hebrew text of the Old Testament, we can't ignore what happens when lay persons enter a technical area of which they know nothing. Phrases like *sounding music* always remind me of a passage from Chekhov's story 'Three Years'.

Как-то у одного известного музыканта я просил места для бедняка-скрипача, а он ответил так: «Вы обратились именно ко мне потому, что вы не музыкант».

One day I asked a well-known musician to give a job to a poor violinist, and here is how he replied: 'You're directing your application to me because you're not a musician yourself.'

Beware of writers who employ musical terms without knowing what they mean. The worst delinquents are often journalists. (In the real musical world *down beat* denotes a strong beat, *up beat* denotes a weak beat, and *crescendo* denotes a gradual increase of loudness, but in vulgar journalese *downbeat* means ‘gloomy’, *upbeat* means ‘hopeful’, and *crescendo* means ‘climax’!) People who organize conferences in big hotels are little better. They use the high-sounding word *plenary* when they mean ‘everyone’, and they often ask their first speaker to give a *keynote address*, which in musical terms is completely meaningless. If ever some sad person asks me to give a ‘keynote address’, I shall chant my entire lecture on a monotone *d*, accompanied by the drone of a marine trumpet.

There are times when we must beware of the expert, but in general we do well to BEWARE OF THE LAYMAN.

Hey! It’s ten o’clock, and we haven’t had morning coffee. The Elysian harmony of Miss Benn’s study is making me want to go asleep. (Carnation-pink walls. Luminous emerald ceiling. A floor of reclaimed railway sleepers, set on their sides. Old Kashan rugs. Nine paintings of Delia as water-nymph, all done in pale blues and greens, which the subject received for her birthday last year. A Lithuanian spinning wheel, made in 1869. A Dolmetsch spinet, made in 1980.) Let us go out and seek some measure of salubrity in ambulation. Who knows? Perchance we can favour one of the local restaurateurs with our custom.

While we walk, Delia reads aloud from an old book called *Number in Scripture*. She has borrowed this book from her great-uncle (Louis Kingsten Eft, the celebrated salamandrologist, whose name, I venture to say, is known to us all).

‘Six is either 4 *plus* 2, *i. e.*, man’s world (4) with man’s enmity to God (2) brought in: or it is 5 *plus* 1, the grace of God made of none effect by man’s addition to it, or perversion, or corruption of it: or it is 7 *minus* 1, *i.e.*, man’s coming short of spiritual perfection.

‘The Hebrew ψ (*shaish*) is supposed to be derived from the root $\psi\delta\psi$ (*shah-dash*), but nothing is known about its origin or signification.

‘At any rate it is certain that *man* was created on the *sixth* day, and thus he has the number *six* impressed upon him.

‘The number *six* is stamped upon the measurements of the Great Pyramid, the unit of which was the inch and its sexagesimal multiples.

‘The number *nine* is a most remarkable number in many respects. It is held in great reverence by all who study the occult sciences; and in mathematical science it possesses properties and powers which are found in no other number.

‘If *ten* is the number which marks the perfection of Divine *order*, then *eleven* is an *addition* to it, subversive of and undoing that order. If *twelve* is the number which marks the perfection of Divine *government*, then eleven falls short of it. So that whether we regard it as being $10 + 1$, or $12 - 1$, it is the number which marks *disorder*, *disorganization*, *imperfection*, and *disintegration*.

‘While *seven* is composed of 3 *added* to 4, *twelve* is 3 *multiplied* by 4, and hence denotes that which can scarcely be explained in words, but which the spiritual

perception can at once appreciate, viz., *organization*, the products denoting production and multiplication and increase of all that is contained in the two numbers separately. The 4 is generally prominently seen in the *twelve*.

‘As to the significance of *thirteen*, all are aware that it has come down to us as a number of ill-omen. Many superstitions cluster around it, and various explanations are current concerning them.

‘But we must go back to the *first occurrence* of the number *thirteen* in order to discover the key to its significance. It occurs first in Gen. xiv. 4, where we read “*Twelve* years they served Chedorlaomer, and the *thirteenth* year they REBELLED.”

‘Hence every occurrence of the number *thirteen*, and likewise of *every multiple* of it, stamps that with which it stands in connection with *rebellion, apostasy, defection, corruption, disintegration, revolution, or some kindred idea.*’

Stop there, Delia. In both 400 and 22 Hebrew gematria, twenty-six is the numerical value of the word יהוה (= the LORD). Twenty-six is two times thirteen. Furthermore, when the Lord Jesus speaks from heaven in Acts 22. 8, he describes himself as Ἰησοῦς ὁ Ναζωραῖος (= Jesus of Nazareth), using three words which in 800 Greek gematria add up to 2197, or thirteen cubed.

Soon we find ourselves entering the basement café of a well-known building. Here we meet Lettuce Boy in the company of his sister Jane, who sang Lully and played Corelli at the end of chapter 3. (Jane Dascey is *deilig i Farve*, as Hans Christian Andersen would say. Lovely in colour. Not the stern bespectacled termagant whom one reader imagined. More like an athletic Euphrosyne. Or a *tall radiance*, as Henry James would say. Miss Dascey wants me to paint her portrait for the ninth time! I shall employ the New Iridescent Technique.)

Thirty seconds later Miss Benn is greeted by her old Latin tutor, Dr Pete Stodie. ‘*Una cum Delia mea,*’ he says in delight. I know Pete Stodie from the local gardening club. He prides himself on being a master of the apt quotation.

Before long our order is taken by a voracious-looking lady from Grimm Fairy Tales. The said lady cries aloud at the sight of my neighbour. ‘Creskey, darling!’

‘Hello, Cynthia,’ says Delia. ‘What are *you* doing here?’

‘I’m freelancing at the moment,’ replies Cynthia.

As we leave the café, Miss Benn asks me a question about two Hebrew words.

‘Take the Greek adjective *dikaion* in its neuter nominative or accusative form,’ she says. ‘Think of other Greek adjectives that have the same ending. Then think of the two Hebrew words *Higgaion* and *Shiggaion.*’ Delia pauses. ‘Tell me if you think this is possible, dear. When David coined those two words, he *knew* that he was giving a Greek-sounding termination to each one of them.’

Yes, it is certainly possible. Concrete walls between contemporaneous cultures tend to exist only in the narrow minds of modern scholars.

‘Good,’ says Delia. ‘Jonah’s melon-plant is *qiqaion* in Hebrew.’ She pauses. ‘By the way, you lot, I really like the chaste and literate Lettuce Girl.’

So do I. For no reason I find myself recalling the gloss which a Breton scribe wrote centuries ago. Five words produce three gematric palindromes.

An hegarat an lacat glas (= She is delectable, with her blue eyes).

As we walk in silence I sleepily imagine a tale called *Hagar Through The Looking-Glass*. At length Miss Benn commands me to write out the title-verse of Psalm 7 in Hebrew and English on the rear fly-leaf of her diary. I obey with expectancy.

שגיון לדוד אשר-שר ליהוה על-דברי-כוש בן-ימיני

(= Shiggaion of David, which he sang unto the LORD, concerning the words of Cush the Benjamite).

‘Thanks,’ says Delia. ‘Do you know something? I think that Cush was Saul. What tribe did Cush belong to?’

‘The tribe of Benjamin,’ you reply.

‘Correct.’ Miss Benn is looking into the distance. ‘Who was the worst Benjamite that David ever had to deal with?’

‘Saul,’ Rosie answers. ‘Give me your diary for a minute, dear.’ Delia obliges. Carefully Miss Stone underlines four letters. The penultimate letter of word one (wau). The first and second letters of word three (respectively aleph and shin). The first letter of word five (lamedh).

שגיון לדוד אשר-שר ליהוה

Having turned the diary sideways, she writes three lines of words and figures. At length she draws a neat box around the three lines of writing.

‘Think in 22 gematria,’ says Rosie. ‘SAUL is spelled shin-aleph-wau-lamedh. Twenty-one, plus one, plus six, plus twelve. A total value of *forty*.’ She pauses. ‘Now look at the psalm-title. The eleventh letter is shin, the tenth letter is aleph, the fourth letter is wau, and the fifteenth letter is lamedh. What is the sum of eleven, ten, four, and fifteen? Forty. Look!’ She holds out the page before us.

Letter no 11 + letter no 10 + letter no 4 + letter no 15 = 40

shin-aleph-wau-lamedh = SAUL (ש א ו ל)

[shin = 21] + [aleph = 1] + [wau = 6] + [lamedh = 12] = 40

‘Brilliant,’ says Miss Benn. ‘Well done, dear.’

Delia closes her eyes. ‘Now attend, you four. Go into 400-gematric mode. SAUL is spelled shin-aleph-wau-lamedh. Three hundred, plus one, plus six, plus thirty. A total value of *three hundred and thirty-seven*. And CUSH is spelled kaph-wau-shin. Twenty, plus six, plus three hundred. A total value of *three hundred and twenty-six*.’ Miss Benn opens her eyes. ‘Come and sit down.’ She leads us over to a vacant bench, and writes a simple equation on a page of her diary which pertains to next January.

326 + [3 + 2 + 6] = 337

What-ho! There can be little doubt about Delia's identification of CUSH as SAUL. David wrote Psalm 7 at a time when Saul was alive, and too dangerous to be named openly.

'Yes, that makes perfect sense,' says Rosie. She regards Miss Benn thoughtfully. 'How did you ever think of doing such a calculation, dear?'

'I didn't have to think very hard,' replies Delia. 'You see, years ago, I did a sort of *Cush-job* myself.' She takes a photograph from her handbag, holds it out before us, and points to the leftmost of three figures. 'Here I am at the age of eighteen. You see me attending an *après-play* party in the company of Cynthia and Joan, two rather unpleasant girls from my old school. You met Cynthia a few minutes ago.' She pauses. 'Those two girls wanted to be serious actresses, and neither of them ever made it. They horrified me. Before they left school, they threw away a lot of their own power by throwing away their honour. They both wanted to have a good time, you see, and they didn't want to *work*. Apart from obeying the commands of their teachers they did very little, they read very little, and they put themselves through no disciplines whatever, so of course they went nowhere.' Miss Benn inhales eloquently. 'For nearly two years they were the Divine Sarahs of the dramatic society. Both of them were my enemies.'

Delia smiles like Circe, and then continues her tale. 'Nabokov talks about *the slight insanity of adolescence*. When I turned seventeen, before I ever heard of gematria, I decided to add up the forenames of my two enemies in terms of the 26 English alphabet. Their forenames added up to 120. Like a lunatic I began to write the number 120 as a graffito on the corners of blackboards and notices. After a couple of weeks I became afraid that my cryptogram would be decoded, so I refined it by subtracting one-plus-twenty from one hundred and twenty to get ninety-nine. Then I turned ninety-nine into a nine-letter gematric formula: THE BEASTS. And I kept writing that formula all over the place until I left school.'

Miss Benn laughs merrily. 'It's funny. Helping me to see SAUL in the name of CUSH may well be the most useful thing that those two losers have ever done. By the way, *Creskey* is my middle name, and *freelancing* means *unemployed*.'

Delia's tale has certainly furnished us with a useful parallel. (If you're going to study, you need to have lived.) Let us return to base. We've spent some time on the cryptograms which the heading of Psalm 7 contains. Of course we realize that the psalm-heading is a piece of meaningful language in its own right, and that it means what it says. David sang his Shiggaion ON, or UPON, or OVER (Hebrew ayin-lamedh) the words of Cush. What are 'the words of Cush'? Well, the ACCUSATION made by Cush is alluded to in verses 3 and 4 of the psalm (AV).

O LORD my God, if I have done this; if there be iniquity in my hands; If I have rewarded evil unto him that was at peace with me; (yea, I have delivered him that without cause is mine enemy):.....

But the WORDS OF CUSH are found much later in the psalm. Before we consider them, let's observe how the name of Cush is spelled in Hebrew.

כוש (Read from right to left: kaph-wau-shin.)

As soon as we get back to Delia's garden study, we look at three consecutive words which appear in verse 17: KAPH-tzaddi-daleth-qoph-wau, WAU-aleph-

zayin-mem-resh-he, and SHIN-mem. These words are rendered in English respectively as follows:

1. *according to his righteousness*
2. *and I will sing praise to*
3. *[the] name of*

The first letter of the first word is KAPH, the first letter of the second word is WAU, and the first letter of the third word is SHIN.

כצדקו ואזמרה שם

Here we have 'the words of Cush'. These three words constitute the variable bass-line ON, or UPON, or OVER which David composes the melody of his Shiggaion. The ninth of the thirteen letters which the three words contain is actually a double mem, so the bass-line comprises fourteen notes, which in their raw forms are as follows (c' = Middle C, and the notes g , a , b , and d = respectively the g , a , b , and d below Middle C).

two-beat g , three-beat g , one-beat g , three-beat a , one-beat b , one-beat b , one-beat d , one-beat c' , two-beat b , two-beat b , three-beat b , one-beat a , three-beat c' , two-beat b .

For its part the *melody* of the Shiggaion, which is accompanied by a version of itself played or sung at the lower third, is encoded in the first letters of certain consecutive words. When I say *certain* consecutive words, I mean all the words between the fourth word of verse 6 and the last word of verse 18, counted inclusively. These two words act as BOUNDARY-MARKERS OF THE MELODY. The fourth word of verse 6 ends sin-gimel, which may be interpreted as shin-gimel, and so as SHIGGA-. The last word of verse ends yodh-wau-nun, which may be interpreted as -ION. Let me spell out the boundary-markers in Hebrew letters. Here is the word SHIGGAION: shin-gimel-yodh-wau-nun.

שגיון

Here are the first four words of verse 6 (AV, verse 5).

ירדף אויב נפשי וישג

And here are the last two words of the psalm (verse 18: AV, verse 17).

יהוה עליון

It may help our understanding to create an English parallel. Pretend that Rosie writes an English poem whose words encode the notation of a piece of music. That piece is cast in the form of a CHACONNE, so Rosie's poem bears the following title. *Chaconne of Rosie, which she sang unto her friends, concerning her travels in Europe*. Now every literate musician knows what a *chaconne* is, but imagine that Rosie is composing the first *chaconne* in musical history. She writes an eighteen-note bass-line, and encodes it in four titular words: *her travels in Europe*. Over that bass-line she writes a melody of ninety-eight notes which she encodes in ninety-eight consecutive words of her text. The first and last of these ninety-eight words are BOUNDARY-MARKERS OF THE MELODY. Each boundary-marker happens to be a proper noun. The first one is the Scottish place-name LAMANCHA, and the last one is the French place-name ARCONNE.

Is that clear? Then we'll go back to working in Hebrew.

The eighteen-verse original text of Psalm 7 is set out below. Each verse is set on a separate line. If you want to identify the ninety-eight melodic notes, locate the fourth word of verse six, touch with one finger its first or rightmost letter, and then touch in turn the first or rightmost letter of every word that follows. Ignore the hyphens. (Who tells us to employ the *rightmost* rather than the *leftmost* letter of each word? David does. You see, *Benjamin* in Hebrew means 'son of my right hand', so every melodic note is a 'Benjamite'.)

שגיון לדוד אשר-שר ליהוה על-דברי-כוש בן-ימיני
יהוה אלהי בך חסיתי הושיעני מכל-רדפי והצילני
פן-יטרף כאריה נפשי פרק ואין מציל
יהוה אלהי אם-עשיתי זאת אם-יש-עול בכפי
אם-גמלתי שולמי רע ואחלצה צוררי ריקם
ירדף אויב נפשי וישג וירמס לארץ חיי וכבודי לעפר ישכן סלה
קומה יהוה באפך הנשא בעברות צוררי ועורה אלי משפט צוית
ועדת לאמים תסובבך ועליה למרום שובה
יהוה ידין עמים שפטני יהוה כצדקי וכתמי עלי
יגמר נא רע רשעים ותכונן צדיק ובחן לבות וכליות אלהים צדיק
מגני על-אלהים מושיע ישרי-לב
אלהים שופט צדיק ואל זעם בכל-יום
אם-לא ישוב חרבו ילטוש קשתו דרך ויכוננה
ולו הכין כלי מות חציו לדלקים יפעל
הנה יחבל-און והרה עמל וילד שקר
בור כרה ויחפרהו ויפל בשחת יפעל
ישוב עמלו בראשו ועל קדקדו תמסו ירד
אודה יהוה כצדקו ואזמרה שם-יהוה עליין

Scholars who study *Beowulf* in the original realize that the anonymous author has chosen to employ certain Anglo-Saxon words because their first letters accord with his *alliterative* purpose.

*hwapere ic fara feng feore gedigde,
sipes werig*

(= yet I came away alive from the compass of my enemies,
weariad by the struggle).

Scholars who study Psalm 7 in the original must realize that David has chosen to employ certain Hebrew words because their first letters accord with his *melodic* purpose. Here's verse 8 (AV, verse 7).

ועדת לאמים תסובבך ועליה למרום שובה

(= So shall the congregation of the people compass thee about:
for their sakes therefore return thou on high).

FIRST LETTERS: wau lamedh tau wau lamedh shin



You already know that a psalm is 50% text and 50% music. If you know in addition that the music of a Hebrew psalm is encoded in the words of its text, you won't expect to account for every textual word in purely linguistic terms.

Creative people are aware that the particular demands of art can affect the shape of an artist's message to a certain degree. Let me give you a rather humble example of what I mean. If you end the first line of an English ABAB quatrain with the word *mountain*, you will find yourself constrained to end the third line with the word *fountain*, even though it may not have been part of your original purpose to mention any such thing.

Look now at verse 8 of Psalm 7 (above), which encodes melody-notes 19, 20, 21, 22, 23, and 24. If David wants the twentieth note of his melody to be a two-beat a, he needs the second word of verse 8 to begin with a lamedh, which (as more than one Hebraist will already have observed) might be omitted with no loss of meaning.

'Right, stop there!' says Miss Stone. 'I'm completely lost. So is Whittaker. So is Miss Benn. So is every single one of your readers.' She rises to her feet. 'We're all prepared to believe that David devised a system of musical notation. But we need you to *explain* that system to us. And before you start, we need you to explain something pretty fundamental.' Rosie inhales audibly. 'David must have represented *the notes which he actually used*. True?' She pauses. 'Well, then. What *notes* did the psalmists use? What *scale* did they use?'

The psalmists used the notes *d*, *e*, *f*, *g*, *a*, *b*, *c'* and *d'*. They used the white-note scale of *d*.

'Prove it,' says Rosie.

All right! Imagine that it's Christmas-time. You've been singing *Personent hodie* in church. You wish that you had a plucked string instrument to play the melody on, and after a while you decide to make one. In your workshop you find an ancient physics textbook, a number of pine boards, a box of tuning-pins, and a coil of thin brass wire. That's enough. You resolve to make a simple psaltery. How many strings do you need, and how should they be tuned? Well, *Personent hodie* uses all eight notes of the white-note scale of *d*, plus an extra *c* at the very bottom: so you need nine strings tuned, in ascending order, *c*, *d*, *e*, *f*, *g*, *a*, *b*, *c'* (that's 'Middle C' on the piano), *d'*.



You have only one thickness of wire. If all the strings are going to have the same tension, what *lengths* should they have?

You tighten up an experimental 24 inches of wire to what feels like optimum tension. It sounds bottom *d*. Then you consult the physics book. 'One half of a string's length will give the octave above', it says: so you tune up 12 inches of wire to sound top *d'*.

Further facts from the physics book allow you to work out the exact lengths of all the other strings. 'Two-thirds of a string's length will give the fifth above,' says the book, and 'three-quarters of a string's length will give the fourth above.'

Now the bottom *d* string is 24" long. Two-thirds of 24 is 16, so the *a* string will be 16" long.

Three-quarters of 24 is 18, so the *g* string will be 18" long.

Three-quarters of 18 is $13\frac{1}{2}$, so the top *c'* string will be $13\frac{1}{2}$ " long.

This *c'* is a fifth above *f*, so (working backward) the *f* string will be three-halves of $13\frac{1}{2}$, that is $20\frac{1}{4}$ ".

Similarly, the *e* string will be four-thirds of the 16" *a* string, that is $21\frac{1}{3}$ ".

Since this *e* is a fifth below *b*, the *b* string will be two-thirds of $21\frac{1}{3}$, that is $14\frac{2}{9}$ ".

Finally, since the top *c'* string is $13\frac{1}{2}$ " long, the bottom *c* string will be 27" long.

Your nine-string instrument will therefore have string lengths as follows.

[*c*: 27"] *d*: 24" *e*: $21\frac{1}{3}$ " *f*: $20\frac{1}{4}$ " *g*: 18" *a*: 16" *b*: $14\frac{2}{9}$ " *c'*: $13\frac{1}{2}$ " *d'*: 12"

By now you are tired of working in halves, thirds, quarters, and ninths of an inch. You decide to express the string-lengths *as whole numbers* by using the lowest common denominator, which is thirty-six.

[*c*: 972] *d*: 864 *e*: 768 *f*: 729 *g*: 648 *a*: 576 *b*: 512 *c'*: 486 *d'*: 432

While these numbers denote so many thirty-sixths of an inch on your particular psaltery, they are also the smallest integers that can express the proportions of the white-note scale of *d*. Leaving aside the bottom c-string, you engrave on the back of an old school ruler the numbers which represent the eight scale-notes.

864 768 729 648 576 512 486 432

One of the pictures in my workshop (see below, left) shows the medieval theorist Guido d'Arezzo teaching a pupil at the monochord. The monochord is a didactic instrument whose single string may be variously 'divided' by moveable bridges. Alongside the string runs a ruler which usually has a length of one thousand small units. (In Iceland the monochord acquired a drone-string and became a proper musical instrument -- see below, right. It was called *langspil*.)



It doesn't matter what unit of linear measurement you use. Whether you work in thirty-sixths of an inch or in millimetres, a monochord-string sounding *d* and divided into 864 units will sound *e* with 768 units of its length, *f* with 729 units of its length, and so on.

You notice that all eight scalar numbers may be formed by variously multiplying two and three.

- d* 864 = 2 x 2 x 2 x 2 x 2 x 3 x 3 x 3, or 27 x 32
- e* 768 = 2 x 2 x 2 x 2 x 2 x 2 x 2 x 2 x 3, or 24 x 32
- f* 729 = 3 x 3 x 3 x 3 x 3 x 3, or 27 x 27
- g* 648 = 2 x 2 x 2 x 3 x 3 x 3 x 3, or 24 x 27
- a* 576 = 2 x 2 x 2 x 2 x 2 x 2 x 3 x 3, or 24 x 24
- b* 512 = 2 x 2 x 2 x 2 x 2 x 2 x 2 x 2 x 2, or 16 x 32
- c'* 486 = 2 x 3 x 3 x 3 x 3 x 3, or 18 x 27
- d'* 432 = 2 x 2 x 2 x 2 x 3 x 3 x 3, or 16 x 27

You observe the ratios of higher to lower notes. The octave ratio is 1 : 2. (If you ever add to your psaltery seven ‘bass’ strings running from *C* to *B*, they will have unitary lengths respectively of 1944, 1728, 1536, 1458, 1296, 1152, and 1024.) The ratio of the perfect fifth is 2 : 3. The ratio of the perfect fourth is 3 : 4. The ratio of the whole tone is 8 : 9. And the ratio of the minor third is 27 : 32. As you observe these ratios, you also perceive the unitary differences between particular notes of the scale. 90 is the number of units between *a* and *c'*. 216 is the number of units both between *d* and *g*, and between *g* and *d'*.

HOW TO BUILD THE SCALE WITH SIMPLE BLOCKS

(OR, HOW TO CUT STEPS IN A LOGARITHMIC SLOPE)

On page 64 we met three numbers which appear in *Táin Bó Cúailnge*. We're going to use those three numbers as building-blocks.

27

13

32

Start with top *d'*, which has a unitary string-length of 432, and descend.

| | | | |
|-----------|-----|---|----------------------|
| <i>d'</i> | 432 | = | [27 + 13 + 32] x 6 |
| <i>c'</i> | 486 | = | 432 + [2 x 27] |
| <i>b</i> | 512 | = | 486 + [2 x 13] |
| <i>a</i> | 576 | = | 512 + [2 x 32] |
| <i>g</i> | 648 | = | 576 + [27 + 13 + 32] |
| <i>f</i> | 729 | = | 648 + [3 x 27] |
| <i>e</i> | 768 | = | 729 + [3 x 13] |
| <i>d</i> | 864 | = | 768 + [3 x 32] |

$$[864 + 768 + 729 + 648 + 576 + 512 + 486 + 432] = [72 + 13] \times [72 - 13]$$

NOTE: A SOUNDING STRING IS NOT INFINITELY DIVISIBLE

In 400 Hebrew gematria the word עטלף (= bat) has a value of 189, and the word עטלפים (= bats) has a value of 239.

On the floor of my study there lie seven different Chinese rugs, all of them patterned with bats. One rug has fifteen bats (ten near the edges, and the remainder in the centre). That rug often brings two equations into my mind. The 384 in the second equation is the unitary string-length of the note *e'*, one octave above 768 *e*.

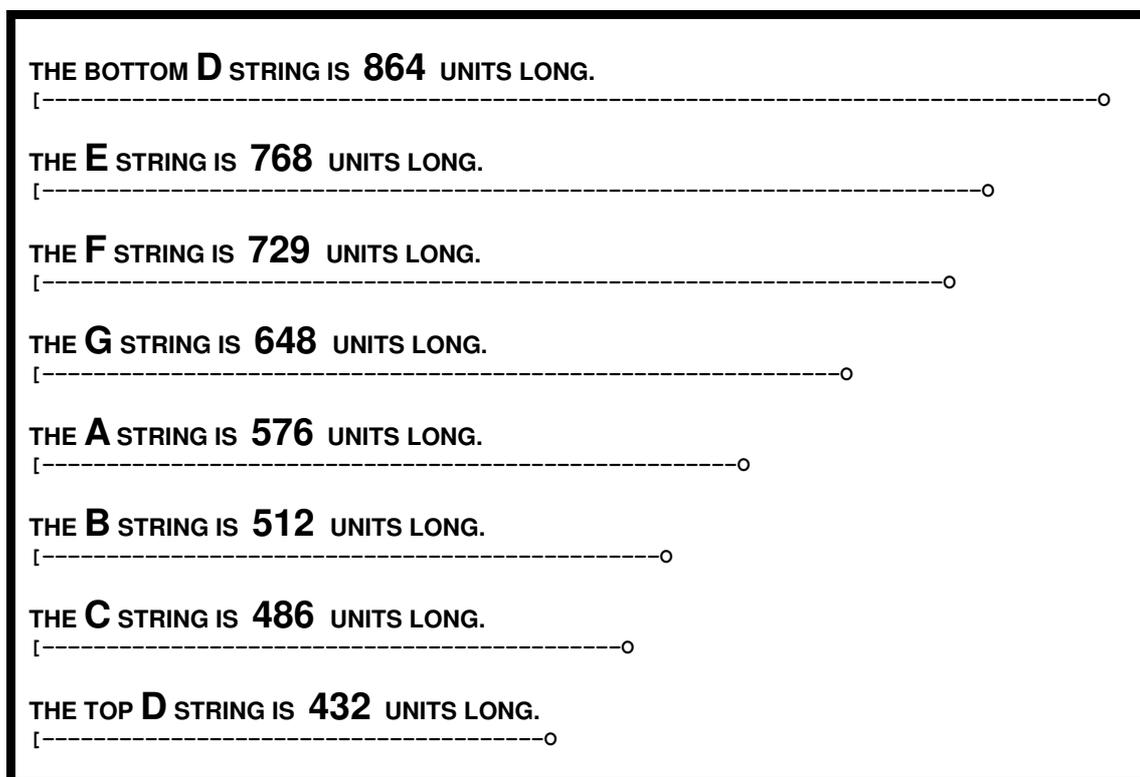
$$[864 + 768 + 729 + 648 + 576] = 15 \times 239$$

$$[576 + 512 + 486 + 432 + 384] = 10 \times 239$$

Sometimes I wonder. Do the murine squeaks of bats, which many adult humans find inaudible, represent the ultimate atoms of musical sound?

$$[27 + 13 + 32] = [3^3 + 13^1 + 2^5], \text{ and } [33 + 131 + 25] = 189 = \text{עטלף}$$

What an *incredibly stupid question*, you think, but you manage to say nothing. Over the next few days you make a didactic *eight-string psaltery* whose strings sound the notes *d, e, f, g, a, b, c', and d'*.



For two weeks you investigate the musical possibilities of your crude didactic instrument. You become fascinated by the white-note scale of *d*, as indeed by the unitary string-lengths that produce its eight different notes.

864 768 729 648 576 512 486 432

You discover that the white-note scale of *d* is a very old scale (much older than the Swedish melody *Personent hodie*, which dates from 1582). Many musicians in ancient Greece knew the white-note scale of *d* as the ‘Phrygian mode’. [See Ernest G McClain, *The Pythagorean Plato* (York Beach, Maine, 1984), 69.] The same scale, as A Z Idelsohn tells us [*Jewish Music* (New York, 1967), 50], is used in nearly 80% of Jewish folk music.

Before long you begin to wonder about the music of ancient Israel. Did David and his school use the white-note scale of *d*, and is reference made to that scale in the Psalms? There are references to musical numbers in Plato. In book 9 of *The Republic*, for example, Socrates tells us that a king lives *εννεακαιεικοσικαιεπτακοσιοπλασιακις* (= seven hundred and twenty-nine times) more pleasantly than a tyrant. Can you find in the text of the Psalms any numerical word corresponding to Plato’s 729?

At first sight it seems not. None of the eight scalar numbers makes an appearance. You can find no 864, no 768, no 729, no 648, no 576, no 512, no 486, and no 432. Even the number seven, leaving aside the sabbath, comes only

three times: 'purified seven times' in Psalm 12, 'Seven times a day' in Psalm 119, and 'sevenfold' in Psalm 79. You feel discouraged.

Then you wonder whether anything musical has been encoded in GEMATRIA. At once Colin Tate the commentator feels impelled to object. 'Does gematria mean using the Hebrew letters as numerals?' he asks brilliantly. When you say *Yes, it does*, Dr Tate backs up his objection with two scholarly references. He has read one devastating sentence: 'This usage is not Biblical; the first traces of it are found on Maccabean coins' [J Weingreen, *A Practical Grammar for Classical Hebrew* (Oxford, 1959), 2]. And he remembers how John McLeish restated the orthodoxy [*Number* (London, 1991), 95]: 'Some historians even ask how the Jewish nation survived for 15 or 16 centuries in spite of having no system of written numerals: the first Hebrew numerals known appear on coins of the Hasmonean dynasty in the 2nd century.'

At length the commentator stops talking, and you return to the Psalter. Does any psalm, you wonder, encode some of the scalar numbers in 400 gematria? Only diligent investigation will tell.

You begin by reminding yourself of the 400 Hebrew alphabet.

aleph = 1, beth = 2, gimel = 3, dalet = 4, he = 5,

wau = 6, zayin = 7, cheth = 8, teth = 9

yodh = 10, kaph = 20, lamedh = 30, mem = 40, nun = 50,

samekh = 60, ayin = 70, pe = 80, tzaddi = 90

qoph = 100, resh = 200, s[h]in = 300, tau = 400

Then you read through the Psalms in Hebrew, looking for obvious instrumental references. The 864-432 numbers relate to plucked strings, so you note down every mention of harps and psalteries. One passage strikes you as deliberately enigmatic: Psalm 49, verses 4 and 5 (verses 3 and 4 in the AV).

פִּי יְדַבֵּר חִכְמוֹת וְהַגֹּת לִבִּי תְבוּנוֹת

(= My mouth shall speak of wisdom; and the meditation of my heart shall be of understanding).

אֶטָה לְמִשְׁלַל אֲזִנִּי אֶפְתַּח בְּכִנּוֹר חִידָתִי

(= I will incline mine ear to a parable: I will open my dark saying upon the harp).

Now Psalm 49's main burden is the folly of trusting in worldly wealth and honour. Once you've read the whole psalm, you realize that verses 4 and 5 don't *introduce* the composer's riddle, or 'dark saying', for what follows them is not enigmatic. You become aware that *verses 4 and 5 constitute the riddle*. You also discern what the second sentence of verse 5 means. 'Open my dark saying upon the harp' doesn't mean, 'accompany the text of my riddle-song on the harp'. It means, 'actually *express my riddle* on the strings of the harp'.

And the composer demands our full aural attention for the chordal enigma (AV, verses 1 and 2).

שמעו-זאת כל-העמים האזינו כל-ישבי חלד

(= Hear this, all ye people; give ear, all ye inhabitants of the world).

גם-בני אדם גם-בני-איש יחד עשיר ואביון

(= Both low and high, rich and poor, together).

Well! You've identified in verses 4 and 5 of Psalm 49 a riddle relating to the strings of the harp, so you resolve to translate the words of the riddle into numbers and see what happens.

Verses 4 and 5 of Psalm 49 contain twelve Hebrew words which you label A to L.

Read from right to left, the words are spelled as set out from left to right below:

- A pe-yodh
- B yodh-daleth-beth-resh
- C cheth-kaph-mem-wau-tau
- D wau-he-gimel-wau-tau
- E lamedh-beth-yodh
- F tau-beth-wau-nun-wau-tau (*final word of verse 4*)
- G aleph-teth-he
- H lamedh-mem-shin-lamedh
- I aleph-zayin-nun-yodh
- J aleph-pe-tau-cheth
- K beth-kaph-nun-wau-resh
- L cheth-yodh-daleth-tau-yodh (*final word of verse 5*)

Here comes the exciting bit! You begin to add the words up in 400 gematria.

Pe plus yodh is $80 + 10 = 90$, so A = 90.

Yodh plus daleth plus beth plus resh is $10 + 4 + 2 + 200 = 216$, so B = 216.

These numbers seem familiar. What are they? After a moment's thought you remember. 90 is the number of units between a and c' . 216 is the number of units both between d and g , and between g and d' .

Impatiently you add up the remaining ten words.

When you find that F adds up to 864, you are unsurprised.

When L adds up to 432, you realize what the riddle is about.

The numerical values of all twelve words come out as follows.

| | | | |
|---|---|---|-----|
| A | pe-yodh = 80 + 10 | = | 90 |
| B | yodh-daleth-beth-resh = 10 + 4 + 2 + 200 | = | 216 |
| C | cheth-kaph-mem-wau-tau = 8 + 20 + 40 + 6 + 400 | = | 474 |
| D | wau-he-gimel-wau-tau = 6 + 5 + 3 + 6 + 400 | = | 420 |
| E | lamedh-beth-yodh = 30 + 2 + 10 | = | 42 |
| F | tau-beth-wau-nun-wau-tau = 400 + 2 + 6 + 50 + 6 + 400 | = | 864 |
| G | aleph-teth-he = 1 + 9 + 5 | = | 15 |
| H | lamedh-mem-shin-lamedh = 30 + 40 + 300 + 30 | = | 400 |
| I | aleph-zayin-nun-yodh = 1 + 7 + 50 + 10 | = | 68 |
| J | aleph-pe-tau-cheth = 1 + 80 + 400 + 8 | = | 489 |
| K | beth-kaph-nun-wau-resh = 2 + 20 + 50 + 6 + 200 | = | 278 |
| L | cheth-yodh-daleth-tau-yodh = 8 + 10 + 4 + 400 + 10 | = | 432 |

Here are the twelve totals.

| | | |
|---|---|--------------------------------------|
| A | = | 90 |
| B | = | 216 |
| C | = | 474 |
| D | = | 420 |
| E | = | 42 |
| F | = | 864 (<i>final word of verse 4</i>) |
| G | = | 15 |
| H | = | 400 |
| I | = | 68 |
| J | = | 489 |
| K | = | 278 |
| L | = | 432 (<i>final word of verse 5</i>) |

If you had found these numbers by transcribing any twelve consecutive words of any psalm, that would be remarkable enough: but here you have a self-contained riddle which announces itself as being *physically related to the harp*.

And now Colin Tate tells you to stop. He thinks you've cracked.

'Even if you accept occasional gematria,' he says, 'the appearance of an 864-word near a 432-word is most likely to be pure chance. There must be any number of 864s in the Bible.'

Is Dr Tate right? Certainly what he says should be tested by a controlled experiment.

'I know a Hebraist who can help us here,' says Delia. 'His name is Cornelius. He has an enormous kit of Biblical computer-tools. I'll go and phone him now.' Miss Benn rises to her feet, and looks at the commentator. 'Do you want Cornelius to run a computer-check on two Biblical books in 400 gematria?'

'Yes, please,' replies Colin Tate.

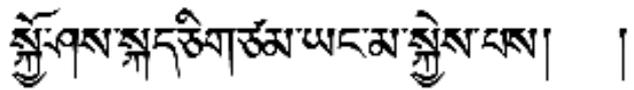
'Right,' says Delia. 'I'll get him to check the book of Genesis, and the book of Psalms.' She goes out to the hall.

Less than ten minutes later Miss Benn returns. Without speaking, she presents Colin Tate with a slip of paper.

The book of Genesis contains 17663 Hebrew words.
Not once in that book do you find a word which adds up to 864.
The Psalter contains 17181 Hebrew words.
Only four times in the Psalter do you find a word which adds up to 864.
And only in Psalm 49 does an '864-word' appear near a '432-word'.

Colin Tate is silent. Why can he not say *I was wrong*?

Delia shows you a second slip of paper on which she has written one line from a famous Tibetan prayer. '*Kyoshe kechik tsamyang makye pey,*' she whispers.


(= We don't feel repentant, even for a moment).

That line of Tibetan might be used as a motto by the many Biblical scholars whose magisterial pronouncements have been disproved by archaeology.

In a state of some bemusement, you return to the two riddle-verses of Psalm 49. After a moment you remind us that the last word of verse 4 adds up to 864, and that the last word of verse 5 adds up to 432. With what is the riddle of Psalm 49 chiefly concerned? With the 864-432 scale. With the white-note scale of *d*.

Now the 864-432 formula indicates all eight notes of the scale, not merely its top and bottom notes, but the 'dark saying' of Psalm 49 is intended to help us calculate *every note* of the scale.

We've already seen how B, which is 216, represents the distance between both *d* and *g*, and between *g* and *d'*. So it is possible to produce 648 (= *g*) either by adding B to L, or by subtracting B from F. By adding and subtracting! Is that the meaning of, 'Both low and high, rich and poor, together'?

You observe that C (= 474) and D (= 420) have a difference of 54. Now the note *c'* (= 486) uses 54 more units of string than the note *d'* (= 432), so you can produce 486 by adding C to L, and then subtracting D (474 + 432 - 420 = 486).

And if to 486 you add A (= 90), you get 576 (= *a*).

Eventually you work out the most economical possible formulae for all eight notes of the scale:

| | | |
|-----------|------------|--------------------------|
| d | 864 | F |
| e | 768 | A + H + K |
| f | 729 | A + F + I – G – K |
| g | 648 | B + L |
| a | 576 | A + C + L – D |
| b | 512 | F + I – D |
| c' | 486 | C + L – D |
| d' | 432 | L |

In 22 terms (there are 22 letters in the Hebrew alphabet) the psalmist has given us an elegant set of formulae based on simple addition and subtraction. He has done so with visible effort. The word for 'wisdom' (= C) is actually a plural form. The word for 'and the meditation of' (= D) is a unique form.

'I must object to the extremely complex formula for 729,' says Colin Tate. 'That formula involves five terms, two additions, and two subtractions.'

'Do something for me,' says Rosie. 'Write down the number 729 in Roman notation.'

'You do it,' says Colin Tate, and Delia mouths three words. *What a loser.*

'All right.' Rosie obliges.

D C C X X I X

$$500 + 100 + 100 + 10 + 10 - 1 + 10 = 729$$

'Seven terms, five additions, and one subtraction,' she says. 'There you have everyday figural notation, not a cryptic formula!'

'Magnificent, Rosie.' Delia smiles grimly. 'Come and help me make the tea. I brought a dozen cheese-and-bacon cartwheels with me.'

For some time I marvel at the barbarity of Roman figural notation.

After a moderate collation, we return to our consideration of Psalm 49.

You concede that the word E (= 'my heart') seems to have no arithmetical function in the riddle, unless an alternative formula for 486 (E + F – D), which uses three consecutive words, is considered more elegant than C + L – D.

While you can't make up your mind about the rôle of E, you're pretty sure about J (= 'I will open'). J isn't needed for any of the formulae, so you decide for the present that its rôle is what a chemist would call catalytic.

But after a while the unuse of J arouses in you a feeling of discontent. You recall that words A, B, and C literally mean, 'My mouth shall speak of *wisdoms*.' Wisdoms! Does that mean that the riddle is to be read in two different ways? You wonder if J may participate in a set of formulae which are based on an alternative numerical alphabet. What happens if you use a different number-line? You decide to try out the 22 alphabet, which runs as follows:

aleph = 1, beth = 2, gimel = 3, daleth = 4, he = 5,
 wau = 6, zayin = 7, cheth = 8, teth = 9
 yodh = 10, kaph = 11, lamedh = 12, mem = 13, nun = 14,
 samekh = 15, ayin = 16, pe = 17, tzaddi = 18
 qoph = 19, resh = 20, s[h]in = 21, tau = 22

Expecting nothing wonderful to emerge, you transcribe the twelve words of the riddle once again, this time in terms of the 22 alphabet. Pe plus yodh is $17 + 10 = 27$, so A = 27. Yodh plus daleth plus beth plus resh is $10 + 4 + 2 + 20 = 36$, so B = 36. The numerical values of all twelve words come out in 22 gematria as follows.

- A pe-yodh = $17 + 10 = 27$
- B yodh-daleth-beth-resh = $10 + 4 + 2 + 20 = 36$
- C cheth-kaph-mem-wau-tau = $8 + 11 + 13 + 6 + 22 = 60$
- D wau-he-gimel-wau-tau = $6 + 5 + 3 + 6 + 22 = 42$
- E lamedh-beth-yodh = $12 + 2 + 10 = 24$
- F tau-beth-wau-nun-wau-tau = $22 + 2 + 6 + 14 + 6 + 22 = 72$
- G aleph-teth-he = $1 + 9 + 5 = 15$
- H lamedh-mem-shin-lamedh = $12 + 13 + 21 + 12 = 58$
- I aleph-zayin-nun-yodh = $1 + 7 + 14 + 10 = 32$
- J aleph-pe-tau-cheth = $1 + 17 + 22 + 8 = 48$
- K beth-kaph-nun-wau-resh = $2 + 11 + 14 + 6 + 20 = 53$
- L cheth-yodh-daleth-tau-yodh = $8 + 10 + 4 + 22 + 10 = 54$

Here are the twelve totals.

| | | | | | |
|----------|----------|-----------|----------|----------|-----------|
| A | = | 27 | G | = | 15 |
| B | = | 36 | H | = | 58 |
| C | = | 60 | I | = | 32 |
| D | = | 42 | J | = | 48 |
| E | = | 24 | K | = | 53 |
| F | = | 72 | L | = | 54 |

Some of these numbers strike you as familiar. Have you already come across the numbers 27, 24, and 32 in connection with the 864-432 scale? Yes. You remember the factors of 864, 768, 729, 648, and 576.

$$\begin{aligned}
 864 &= 27 \times 32, \text{ or } A \times I \\
 768 &= 24 \times 32, \text{ or } E \times I \\
 729 &= 27 \times 27, \text{ or } A \times A \\
 648 &= 24 \times 27, \text{ or } A \times E \\
 576 &= 24 \times 24, \text{ or } E \times E
 \end{aligned}$$

You notice that A, E, and I are respectively the Hebrew words which are rendered in English as 'my mouth', 'my heart', and 'mine ear'. And you work out the remaining scalar numbers by a mixture of multiplication and addition.

$$\begin{aligned}
 512 &= [I \times J] - [I \times I] \\
 486 &= [A \times C] - [A \times D] \\
 432 &= [A \times J] - [A \times I]
 \end{aligned}$$

So once again, using one-step-at-a-time arithmetic, you have arrived at a 22-term set of formulae for the eight notes of the 864-432 scale. But the formulae for 512, 486, and 432 strike you as rather inelegant. You wonder. There are TWO different 'wisdoms', or two different number-lines. Should you be looking for something other than the eight notes of the 864-432 scale? After examining the numbers represented by A, B, E, F, I, J, and L, you think of two possibilities. One is that these seven numbers provide factors for the unitary lengths of eight 'bass' strings, that is for the notes *c* to *C*, as follows.

| | | |
|----------|------|-----------------|
| <i>c</i> | 972 | A x B |
| <i>B</i> | 1024 | I x I |
| <i>A</i> | 1152 | E x J |
| <i>G</i> | 1296 | A x J, or E x L |
| <i>F</i> | 1458 | A x L |
| <i>E</i> | 1536 | I x J |
| <i>D</i> | 1728 | B x J, or I x L |
| <i>C</i> | 1944 | A x F, or B x L |

But why have alternative formulae for only *three* of the strings? That question leads you to consider a second possibility: the triple depiction of four intervallic ratios.

| | | | | | | | |
|----------------|-------|---|-------|---|-------|---|-------|
| Octave | 1 : 2 | = | A : L | = | B : F | = | E : J |
| Perfect fifth | 2 : 3 | = | B : L | = | E : B | = | J : F |
| Perfect fourth | 3 : 4 | = | A : B | = | E : I | = | L : F |
| Whole tone | 8 : 9 | = | E : A | = | I : B | = | J : L |

In addition, $27 : 32 = A : I$ = the ratio of the *minor third*.]

'That's enough for today,' you say. 'The riddle of Psalm 49 provides us with a *lesson in musical physics*.'

Hark, the doorbell! Miss Dascey will be joining us for lunch. In the vestibule Jane speaks to me quietly. Her Wicked Stepfather wants her to leave the church of which she is a member. He also wants her to follow his own example by purchasing shares in some wonderful new gold-mine. Lettuce Girl has brought a wonderful new word to birth: 'vitricicide', from Latin *vitricus* (= stepfather).

We can take another look at Psalm 49 when we get to chapter 30. Let me now ask and answer a question for Colin Tate's benefit. What have we established for certain by applying gematria to the riddle of Psalm 49's fourth and fifth verses? First, that the Hebrew numerical alphabet is not 'post-Biblical', but Biblical, and at least bifurcate. (The old scholarly orthodoxy about 'no system of written numerals' involved an argument from silence which was propounded by the deaf.) Secondly, that the psalmists used the white-note scale of *d*, the 864-432 scale. Thirdly, that one psalmist has recorded the 864-432 scale as a riddle in the Hebrew text of Psalm 49.

Why did one psalmist bother to record the 864-432 scale? Do your findings represent merely a species of esoteric cleverness? No. Cryptography for its own sake is vacuous, and the man who tries to mystify you does so precisely because *he has nothing of value to say*. But the Biblical writers want to be UNDERSTOOD. Thus the numerical riddle of Revelation 13.18 actually begins by inviting solution (in language reminiscent of Psalm 49).

Here is WISDOM. Let him that hath UNDERSTANDING count the number of the beast: for it is the number of a man; and his number is Six hundred and threescore and six.

The Lord Jesus said in Luke 11. 9,

Ask, and it shall be given you; seek, and ye shall find; knock, and it shall be opened unto you.

And Solomon said in Proverbs 25. 2,

It is the glory of God to conceal a thing: but the honour of kings is to search out a matter.

Well! You have *searched out*. You have *sought and found*. You have even *counted the number*. Now you realize why one Biblical writer concealed the 864-432 scale in a verbal text. The psalmist was furnishing future performers with an essential element of musical performance.

'And hereby hangs an *enormous* tale,' says Delia. 'It would be stupid for the psalmist or psalmists to record only one element.'

'What do you mean?' demands Colin Tate testily.

'I mean that it would be stupid to record *only the scale*,' Delia replies. 'The psalmists **MUST** have concealed two further elements in their works, if they wanted their scale to be anything more than a fascinating dead letter.' She pauses. 'One is an alphabetical system of notation. The other is a number of actual melodies.'

'Ooohhh!' says Rosie. 'I feel as if I'm witnessing a kind of resurrection.'

So do I.

Li Bai wrote one seven-character line which could stand as an epitaph over most of the world's ancient music.

趙 瑟 初 停 鳳 凰 柱

(= A Zhao lute falls silent, and is placed on its double-phoenix stand).

For his part the Romanian poet Mihai Eminescu once asked, in a celebrated ode,

*Pot să mai renviu luminos din el ca
Păsărea Phoenix?*

(= Can I return from it [= the pyre], aglow with life, like
The Phoenix Bird?)

The answer to Eminescu's question is YES! Even the lute-stand of Li Bai relates to what the Serbian poet Vojislav Ilić calls *rajski feniks* (= the paradisaical phoenix). Notes that are distant from us in time may be heard again, in our own time.

In your memory there sounds one powerful line from the Kurdish anthem.

Em xortên Midya û Keyhusrew in (= We are the children of Media and of Cyrus).

Resurrection is built into the constitution of the universe, so we don't need to think sadly about a 'silent lute'. We can rejoice in a wonderful line of Xu Hun.

遙 夜 汎 清 瑟

(= The pure notes of a distant harp float on the night air).

Now attend. Although the white-note scale of *d* is not a melody in its own right, it comprises the eight 'pure notes' from which many ancient melodies were fashioned. In the next chapter we'll learn how each of these eight notes is associated with an alphabetical symbol that also denotes a particular unit of musical time. Let me summarize the Davidic system. You have eight notes: *d, e, f, g, a, b, c'* and *d'*. Each letter of the Hebrew alphabet represents *a particular note of the scale*, and also *the number of musical beats* which that note contains. (If a one-beat note lasts for half a second, a two-beat note will last for one second, and a three-beat note will last for one and a half seconds.)

Chapter 14 is about to end, because I'm starving. We shall go for lunch to the Airport Road Café, which is romantically located near the village of Dundrod (stress the second syllable). Our journey takes us past a little green church whose ministry was once largely devoted to the 'New World Order'. Oh, dear! In the pursuit of apocalyptic thrills, many evangelical Christians have surrendered themselves to weak silliness. There really *is* a one-world conspiracy, and its agents are fundamentally evil, but much of the anti-globalist propaganda that we hear today is worse than infantile. Who cares about the stupid god-or-devil dictum of a dead politician? Who believes that the Illuminati are the puppet-masters of world history? Who can accept a list of thirty-third degree masons which includes Yasser Arafat, Benyamin Netanyahu, Vladimir Lenin, William Booth, Winston Churchill, Franklin D Roosevelt, Joseph Stalin, Walt Disney, Colin Powell, Jesse Jackson, Billy Graham, George H W Bush, Saddam Hussein, and Gene Autry? Who has time to consider the trivial antics of college students in East Anglia or Connecticut? The embryo of a fascist world government already exists, and I'm not talking about the Irish Peatland Conservation Council.

Three years ago the little green church organized WHY-THEY-WERE-WRONG lectures on people like Friedrich Nietzsche and Maynard Keynes. The lady who lectured on Keynes presented her audience with a kaleidoscopic cento of quotations. When she got to the word *Sumerians*, I fell asleep.

Words ought to be a little wild, for they are the assault of thoughts on the unthinking. The classical theorists resemble Euclidean geometers in a non-Euclidean world who, discovering that in experience straight lines apparently parallel often meet, rebuke the lines for not keeping straight -- as the only remedy for the unfortunate collisions which are occurring. Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally. Newton was not the first of the age of reason. He was the last of the magicians, the last of the Babylonians and Sumerians.....

Delia often says that we need both another Newton and another Keynes. I reckon that the prophets of post-autistic economics are right to study what Anne Mayhew calls 'old but good ideas'. In time they may get round to studying the Bible. We need fallow years. We need jubilees. Above all, we need to set a high value on the maternal and domestic work of women. Lemuel's mother did.

HERE IS WHAT MUST NEVER HAPPEN TO GEMATRIA

.....it is rare for the fossil record to catch such palaeolyanthropes.....

From an article in *The Economist*, 15 October 2009

Money can have a malign gravity. So can a group of ambitious humans.

Years ago I was present at the birth of a new academic discipline. We shall pretend that the baby subject was named *palaeolyanthropy*. A 'Senior Academic Board', by which I mean a self-appointed band of cronies, controlled the maternity ward. Some of these worthies appeared to be quite complacent about self-publishing, and some of them displayed an utter contempt for normal academic courtesy. Anyway! The cronies had decided in advance that their new discipline of palaeolyanthropy would involve only the particular ancient werewolves, the particular ancient texts, and the particular parts of the world in which they themselves were interested. Knowing that the priesthood of academe would accept them if they arrayed themselves in scholarly apparatus, they declared that the Temple of Palaeolyanthropy was their impeccably footnoted baby. Today, although the infant subject is still characterized largely by self-publication, it is beginning to find acceptance. Many members of the priesthood are quite gullible.

Ordinary people like myself study Biblical gematria at home. Other people want to be important, to have careers, and even to become the L Ron Hubbards of academe. If a new scholastic discipline called 'gematriology' ever manages to achieve the state of babyhood, it will quickly develop all the claptrap appurtenances of boobydom. Before long the arbitrarily conceived orthodoxies of a ruling mafia will become received ideas. Any person who hopes to find employment in the Temple of Gematriology will be obliged to treat those ideas reverently. Research students will be told what they are required to believe, and what they are allowed to discover. Don't be a gematrist! Be a gematrist. Dash it all, I didn't learn to ride a horse so that I could call myself a hippologist.

You may know that the square root of minus one is plus or minus i . In 800 English gematria *palaeolyanthropy* adds up to 2079, reminding us that one value of i to the power i is 0.2079, but the word is otherwise useless. Ignore any new discipline which is chiefly concerned to promote ITSELF. Before long the Temple of Palaeolyanthropy will end up like the tower of Penuel in Judges 8. 17. Or perhaps it will melt away, as Robert Frost said, 'like a piece of ice on a hot stove'.

'I am *exhausted*,' says Colin Tate. 'Chapter 14 has been a wild kaleidoscope of violets, Delia's pavilion, Herod, secret writing, the number thirteen, acting, a church, the New World Order, money, lycanthropy, and horse-riding.' He pauses. 'I need to go and lie down for a while. Maybe you can provide me with a pillow!'

But Miss Benn prefers to improvise a nonsensical Shakespearean cento.

'She hath not seen the change of fourteen years
That breathes upon a bank of violets.
To our pavilion shall I lead you first?
Herod of Jewry dare not look upon you,
Nor read the secrets in't. All this we swear
As maids of thirteen do of puppy-dogs:
I'll prove a busy actor in their play
In spite of pope, or dignities of church.
O brave new world! I sent you money, sir,
And now loud-howling wolves arouse the jades:
We must to horse again. Go, go, provide.'

'Who assembled those pieces of Shakespeare?' asks Colin in astonishment.

'No one assembled them,' Delia replies. 'They came together spontaneously. I mean, the poem itself arose from nothing, and rambled along.'

'That is *ridiculous!*' exclaims Colin.

So it is. Any scientist who studies the origin of life will agree with Dr Tate.

AN EDIFICE BUILT ON PURE CHANCE

OR, THE SERIOUS SCHOLARSHIP OF 'COULD PERHAPS'

The only hostile interlocutor in chapter 14 has failed to land a single punch. Does it appear to certain readers that I have presented my case in a one-sided manner? Then let me go back in time and bring someone else into our discussion. I happened to publish an article on the riddle of Psalm 49, entitled 'The scale of the psalter', in *FoMRHI Quarterly* 76 (July, 1994). Dr Ephraim Segerman published a response to my article in the October issue of the same journal. Here is part of what he had to say.

.....nothing has been 'established for certain' by Crookes, in spite of his claim. Scholarship can never be that good. But whether his analysis has any scholarly value at all depends on his demonstrating that the numerological association of this scale with these verses in Psalm 49 is objectively special. We can't take his word for it. All that he has established is possibility, not probability. Applying the same industry and imagination to other verses, trying other ancient scales as well, could perhaps lead to other equally impressive results.....For his work to be acceptable as serious scholarship, he must demonstrate that his hypothesis objectively fits the evidence better than alternatives. The obvious alternative here is that it is an edifice built on pure chance.

Dr Segerman, who has written many earnest essays about 'serious scholarship', is a man of formidable industry who always expresses himself fearlessly. Let me now declare my gratitude to Dr Segerman by making his comments available to a wider readership. If you have any interest in musical instruments you should buy his book *The Development of Western European Stringed Instruments* (published in 2006 by Lulu.com).

CHAPTER 15: INSTRUCTED IN THE SONGS OF THE LORD

*Dies irae, dies illa,
Dinosaurius fit aquila,
Teste Darwin cum gorillâ.
Rex Hunnorum est Attila!
Circumflex et nunc cedilla,
Potentilla tormentilla,
Mexicali Rose tortilla,
Solis ortus in Tequilâ:
Haec est via Amarillo?*

Horatius Jacobus Carbonator, 'Baseborn Palinode'

Last night the bland Archdeacon Blennerhassett Blane and I were playing Inon Zur's *Prince of Persia* with an ensemble called the Boone Silver Band who needed two extra tubas. By the time you've studied chapter 15, you'll be able to find the fourth, sixteenth, and twenty-second words of the foregoing sentence encrypted gematrically in the epigraphic poem. What a reward! Now let us begin.

Numbers are important in the Bible. Two she-bears tear *forty and two children* in II Kings 2. 24. In John 21. 11 a net contains *an hundred and fifty-three* fish. Revelation 13. 18 tells us to *count the number*. And Psalm 87. 6 says, *The LORD shall count*. So you don't feel uneasy about having found a whole garden of numbers in two verses of Psalm 49. A Canadian scholar called Lexis Picot dislikes the idea of a numerical message in poetry of any kind, but then he has been brought up to believe that poetry is created only by Forlorn Bosoms 'Neath Th' Afflicted Welkin, and that the job of its creators is to address Eternal Problems, or Sublime Intimations, or Metaphysical Yearnings. When Picot reads

*Into the valley of death
Rode the six hundred*

he savours the tragedy and ignores the numerical specificity. He doesn't know the dictum of Alexander Pope:

Most by NUMBERS judge a Poet's song.

Lexis Picot has never read the words of John Milton:

*Feed on thoughts that voluntarie move
Harmonious NUMBERS,*

Now the word *numbers* in each of the last two citations actually denotes units of metrical verse, but there is nothing unpoetic about numbers in the mathematical sense. You can think of examples for yourselves.

'Four and twenty blackbirds in the nursery rhyme,' says Rosie.

'Sixty thousand bugles in *The Song of Roland*,' you say.

'Jamshyd's Sev'n-ring'd Cup in *The Rubaiyat of Omar Khayyam*,' says Delia.

Hereby hangs a tale, for Omar Khayyam was rather good at numbers. He was a major figure in the history of mathematics and chronology. We still have his treatise on algebra and his commentary on Euclid. Once in Samarkand I heard a man saying with some pride that Omar Khayyam the astronomer had lived in the Golden City for several years. Throughout the English-speaking world Omar Khayyam is best known as a poet, thanks largely to the translator Edward Fitzgerald, who published his first free rendering of the Rubaiyat in 1859 and his second in 1868. You recall the opening stanza of the 1859 version.

*Awake! for Morning in the Bowl of Night
Has flung the Stone that puts the Stars to Flight:
And Lo! the Hunter of the East has caught
The Sultan's Turret in a Noose of Light.*

You notice how much better it is than the second edition of 1868.

*Wake! For the Sun behind yon Eastern height
Has chased the Session of the Stars from Night;
And to the field of Heav'n ascending, strikes
The Sultan's Turret with a Shaft of Light.*

You're reminded that many compositions survive in more than one version. Think of Mucha's *Été*. In the course of your travels, you've seen the pastel design (still wonderfully alive), the preliminary drawing, and the final *panneau*. In the same connection you remember the Bruckner symphonies: two versions of no 1, two versions of no 2, three versions of no 3, and three versions of no 4. Then you think of Psalm 18 and *its* alternative version, II Samuel 22.

That brings you back to the 1868 Omar Khayyam. Why did Fitzgerald turn his graceful bird of paradise (the 1859 version) into such a clumsy old crow? *Yon* makes a bad weak syllable; *Session* is an ugly piece of padding; the next word *of* makes a bad strong syllable; *from night* is illogical – stars belong to night, and once they go night is over; line 3 is unfluent; and *strikes.....with a Shaft* is a good bit less exciting than *has caught.....in a Noose*. What was Fitzgerald doing?

Suddenly you are struck by an utterly frivolous idea, which you think of working into a humorous article. Fitzgerald was using the 1868 version to send a secret message. You remember three words of stanza 51.

*Yes; and a single Alif were the clue --
Could you but find it -- to the Treasure-house,
And peradventure to THE MASTER too.....*

A single Aleph! At once you realize. Fitzgerald wants you to look at the individual letters of his poem.

Well, take the last three words of stanza 1. *Shaft of Light* must involve an acrostic, for the three initials spell *sol*, the Latin word for 'sun'. Then you recall stanza 12 – the bit about *singing in the Wilderness*. *Sol* must have a musical meaning as well: it's *sol* as in *solfa*, the fifth degree of a scale that runs *ut, re, mi, fa, sol*. What-ho!

That's enough frivolity, you tell yourself sternly, but there's still something in your head about alternative versions. What is it? Oh, yes -- David's song in II Samuel 22, and the 'revised version' in Psalm 18. You decide to look up both passages in English and Hebrew.

The first three verses of II Samuel 22 read as follows in Hebrew. (Verse 1 = the first two lines, verse 2 = the middle line, and verse 3 = the last two lines.)

וידבר דוד ליהוה את דברי השירה הזאת ביום
הציל יהוה אתו מכף כל איביו ומכף שאול
ויאמר יהוה סלעי ומצדתי ומפלטי לי
אלהי צורי אחסה בו מגני וקרן
ישעי משגבי ומנוסי משעי מחמס תשעני

II Samuel 22 may represent the original form of David's song. Verses 1, 2, and 3 of the chapter read as follows in the AV:

And David spake unto the LORD the words of this song in the day that the LORD had delivered him out of the hand of all his enemies, and out of the hand of Saul: And he said, The LORD is my rock, and my fortress, and my deliverer; The God of my rock; in him will I trust: he is my shield, and the horn of my salvation, my high tower, and my refuge, my saviour; thou savest me from violence.

The first three verses of Psalm 18 read as follows in Hebrew. (Verse 1 = the first three lines, verse 2 = the fourth line, and verse 3 = the last two lines.)

למנצח לעבד יהוה לדוד אשר דבר ליהוה
את-דברי השירה הזאת ביום הציל-יהוה
אותו מכף כל-איביו ומיד שאול
ויאמר ארחמך יהוה חזקי
יהוה סלעי ומצודתי ומפלטי אלי צורי
אחסה-בו מגני וקרן-ישעי משגבי

The first three verses of Psalm 18 (in the AV, title plus verses 1 and 2), read as follows.

To the chief Musician, A Psalm of David, the servant of the LORD, who spake unto the LORD the words of this song in the day that the LORD delivered him from the hand of all his enemies, and from the hand of Saul: And he said, I will love thee, O LORD, my strength. The LORD is my rock, and my fortress, and my deliverer; my God, my strength, in whom I will trust; my buckler, and the horn of my salvation, and my high tower.

Four differences between the versions leap to your eye at once. First, the Hebrew word for 'him' is spelled aleph-tau-wau in II Samuel 22. 1 (below, left), but aleph-wau-tau-wau in Psalm 18. 1 (below, right).

אתו

אותו

(The case of *judgment* and *judgement* in British English is similar: both forms are correct.)

Secondly, the introductory verse in II Samuel uses the LORD's name twice.....

וידבר דוד ליהוה את דברי השירה הזאת ביום

הציל יהוה אתו מכף כל איביו ומכף שאול

.....but verse 1 of Psalm 18 makes a point of using the LORD's name three times in the course of its first fourteen words.

למנצח לעבד יהוה לדוד אשר דבר ליהוה

את-דברי השירה הזאת ביום הציל-יהוה

Thirdly, while in II Samuel the word kaph-pe is used for 'hand' each time.....

מכף כל איביו ומכף שאול

.....two different words are used in Psalm 18: first kaph-pe, and then yodh-daleth.

מכף כל-איביו ומיד שאול

Fourthly, the two Hebrew words which begin the actual song in II Samuel (= The LORD is my rock, and my fortress).....

יהוה סלעי

.....are preceded in Psalm 18 by a declaration (= I will love thee, O LORD, my strength):

ארחמך יהוה חזקי יהוה סלעי

Why in Psalm 18 does David describe himself as 'the servant of the LORD', you wonder, when he's going to use the LORD's name twice more in the next nine Hebrew words? Has he some didactic purpose? Does he want us to focus on the LORD's name in the actual song?

You look at the Hebrew text. The first mention of the LORD's name begins on the tenth character of the psalm's heading, and the character involved, yodh, has a numerical value of ten in 400 Hebrew gematria. That doesn't strike you as helpful, but it prompts you to look at the tenth sung word of the actual song.

The Hebrew word in question means *I will trust in him*, and at first sight it appears to be completely undidactic. Then you notice how it is spelled.

אחסה-בו

The first three letters of the word are aleph, cheth, and samekh.

At once your attention is caught by the first five sung words of the psalm.

אֶרְחַמְךָ יְהוָה חֲזָקִי יְהוָה סִלְעִי

These five Hebrew words are translated in the AV thus:

I will love thee, O LORD, my strength. The LORD is my rock.....

So you have five words, five layers, with the LORD's name forming the even-numbered layers of a five-layer sentence. Believing that the first three of these layers represent a deliberate Davidic addition to the text of II Samuel, you spell out all five Hebrew words as follows.

| | | |
|----|------------------|-----------------------------------|
| 1. | I will love thee | ALEPH -resh-cheth-mem-kaph |
| 2. | O LORD | yodh-he-wau-he |
| 3. | my strength | CHETH -zayin-qoph-yodh |
| 4. | The LORD is | yodh-he-wau-he |
| 5. | my rock | SAMEKH -lamedh-ayin-yodh |

Something is going on here.

David's triple use of the LORD's name in the title is meant to focus our attention on the double use of the LORD's name in the first five sung words of the psalm.

The first, third, and fifth sung words, which enwrap the LORD's name, begin respectively with ALEPH, CHETH, and SAMEKH.

These three letters are recapitulated in the tenth sung word (= I will trust in him), which begins ALEPH-CHETH-SAMEKH.

Everything from the aleph of the first word to the samekh of the tenth word is contained in forty-four letters, and forty-four is the 400 gematric value of the word lamedh-daleth-wau-daleth (= by David, or of David – fourth word of the Hebrew psalm-title). Do these forty-four characters hold the key to David's *ut re mi fa sol*? You decide to investigate the possibility synthetically. That means taking the Hebrew alphabet, pretending you're David, and trying to devise a system of notation. Before you start, you read what Le Corbusier has to say on the subject [*Le Modulor* (Basel, 2000), 15].

On a pu, pendant des millénaires, faire usage du son pour chanter ou pour jouer et danser. Ce fut la première musique qui se transmettait oralement, sans plus.

Mais un jour -- six siècles avant J.-C. -- quelqu'un s'inquiète de rendre transmissible, pour toujours, l'une de ses musiques autrement que de bouche à oreille, donc de l'écrire. Il n'existait ni méthode ni instrument pour le faire. Il s'agissait de fixer ce son en des points déterminés, rompant ainsi sa parfaite continuité. Il fallait le représenter par des éléments saisissables, par conséquent découper le continu selon une certaine convention et en faire du gradué. Le gradué constituerait les échelons d'une échelle (artificielle) du son.

Comment sectionner la continuité du phénomène sonore? Comment découper ce son selon une règle admissible par tous, mais surtout efficace, c'est-à-dire capable de souplesse, de diversité, de nuances et de richesse et pourtant simple et maniable et accessible?

For thousands of years people were able to use sound for singing, or for playing and dancing. That was the first music, and it was transmitted purely by the voice.

But one day, six centuries before Christ, someone took the trouble to make one of his compositions available to the whole of posterity. Instead of relying on the oral tradition, he encoded his music in writing. At the time there was no system or tool that would answer to his purpose. He had to break up the perfect continuity of his musical sound by establishing a number of precise units. He also had to represent the sound with symbols that people would understand. So he divided up the continuous path of sound in accordance with certain rules, and turned it into a set of steps. These steps would become the rungs of a man-made musical ladder or scale.

How would he divide the unbroken body of musical sound into pieces? And how would he cut up the sound in a systematic way? Whatever system he devised would have to be accepted by everyone. Above all, it would have to work well in practice. In other words, it would need to be flexible and versatile. It would need to be capable of expressing both subtlety and amplitude. At the same time, it would have to be easy for people to understand and use.

Some of the Psalms are headed by words or phrases which aren't easy to understand. Thus Psalm 22 is headed *upon Aijeleth Shahar* (= the deer of morning), and Psalm 60 is headed *upon Shushan-eduth* (= the lily of testimony).

Scholars have tended to construe these mysterious headings as tune-names, but at times the verbal combinations are too strange to permit such a construction. You imagine a preacher saying, 'Let us sing Psalm 60 to the tune *Forensic Florist*.'

It occurs to you that at least some of the psalm-headings may be notation-mnemonics, giving the beginnings of particular tunes. You wonder if the Hebrew words which mean 'the lily of testimony' represent the opening notes of a melody. Since childhood you've known that the inglorious English phrase *faded cabbage* may bear a musical meaning.

F A D E D C A B B A G E

You reflect that we use only seven letters of the English alphabet in our notation-system.

A B C D E F G

Then you remember the Hebrew word in Psalm 22's heading which is transliterated 'Aijeleth' in the AV. That word is spelled aleph-yodh-lamedh-tau, so it contains the *first* and the *last* letters of the Hebrew alphabet.

אֵלֶת

It seems to you therefore that if 'Aijeleth' was part of a notation-mnemonic, then the entire Hebrew alphabet must have been involved in the notation-system.

Now the notation of tonic solfa has to put symbols of time, or length, beside its *d*, *r*, *m*, *f*, and so on. For its part staff notation, which doesn't use letters at all, has to symbolize both the place and the time of each note. But you've already seen how one psalmist concealed the 864-432 scale in the plain letters of a Hebrew text. And you've realized that the concealment of a scale is pointless unless both notation and melodies are also concealed in the psalm-texts. That rules out any symbols additional to the Hebrew letters themselves. So whatever the Hebrew alphabetical notation-system was, the individual Hebrew letters must have been completely self-sufficient as musical notes. Any one letter must have indicated both PLACE (what note of the scale was to sound) and TIME (how long the note was to sound).

You already know that twelve letters of the Hebrew alphabet bear double *numerical* meanings. (Kaph can represent either 20 or 11, lamedh can represent either 30 or 12, and so on.)

The question now is how to plug the 864-432 scale into twenty-two Hebrew letters. Did the Hebrew alphabet cover the musical range of a twenty-second, or three octaves? If it did, you can forget about different time-values. You can effectively forget about most of the alphabet as well, since choral singers tend not to have a range of three octaves.

Two musical facts occur to you. One: most modern hymn-tunes have a range of about an octave. Two: the three parts of Georgian sacred music are all contained by the range of a major tenth.

At length you come back to thinking about the scale of Psalm 49, and about the Hebrew alphabet.

On the one hand you have seven distinct notes plus an upper tonic (top *d'*).



On the other hand you have the twenty-two Hebrew letters aleph to tau.

א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת

Any system that you devise is going to be limited in some way. If you wanted to have three different time-values for all eight notes, for example, you'd need twenty-four letters. But the limits imposed by a 22-letter system must simply be accepted as facts of musical life.

You remember that the 400 Hebrew alphabet is severely limited (it runs out of letters once it gets to 400), and yet you've seen with what tremendous sophistication it can be handled. In the 400 gematric alphabet the letters aleph to teth denote units, the letters yodh to tzaddi denote tens, and the letters qoph to tau denote hundreds.

Units, tens, and hundreds! You think for a moment of the three temporal units in Daniel 12. 7:

למועד מועדים וחצי (= for a time, times, and an half).

Did David set himself to devise a musical alphabet which would distinctly represent notes of one, two, and three beats? He would have had enough letters to cover three runs of the seven notes *d* to *c'*, and one letter to spare. (The fact that in Psalm 49's riddle the number 864 comes before the number 432 tells us that the Hebrew scale was conceived of as an ASCENT.)



David might then have used the 'spare' letter, tau, to represent the three-note upper tonic, *d'*. Dreamily you wonder whether the tuned silver trumpets (one-note instruments?) would ever have played this note in *tutti* sections. You remember two Hebrew words that denote the sounding of a trumpet: tau-qoph-ayin (below, left), and tau-resh-wau-ayin-he (below, right).

תקוע

תרועה

Both words begin with tau. You happen to know that the letter T has been used as a lingual 'starting-consonant' by trumpeters of every time and place. First you think of Vergil, *Aeneid* IX. 503-504:

*At tuba terribilem sonitum procul aere canoro
Increpuit....*

(= but then, from far away, a bronze trumpet sang out its dreadful call).

Then you recall the much more robust line of Ennius which Vergil refined:

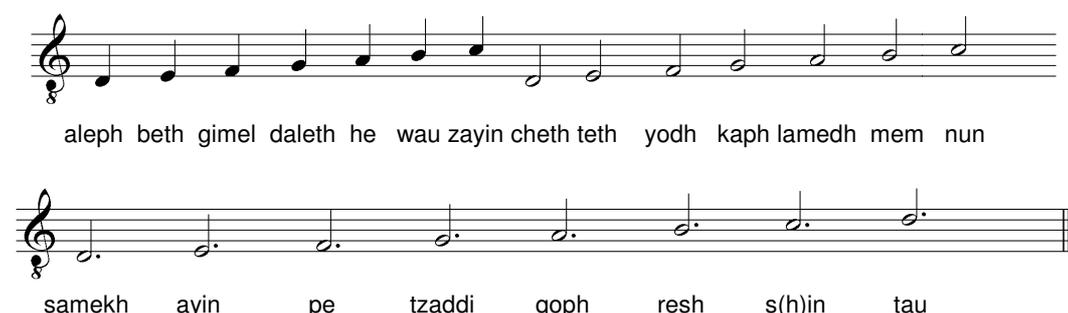
At tuba terribili sonitu taratantara dixit

(= but the trumpet gave voice to its dreadful song of 'Taratantara!').

Suddenly you remember a third Hebrew vocable which begins with tau. The word tau-beth-lamedh (= world) appears fifteen times in the Psalter.

תבל

That three-letter word, which begins with tau, has a 400 gematric value of 432, and 432 is the unitary string-length corresponding to the note *d'*! So setting aside for the moment any thought of trumpets, you reckon that David's complete musical alphabet might have run as follows.



Now you're ready for action. Have you found what Fitzgerald calls 'the Clue....to the Treasure-house'? Well, you can only try your system out on some of the psalm-headings, and see what happens.

First of all you transcribe two words involving eight characters from the heading of Psalm 22. The two words are transliterated 'Aijeleth Shahar' in the AV, but in the Hebrew original they are spelled aleph-yodh-yodh-lamedh-tau he-shin-shin-cheth-resch (both the second and the sixth characters stand for double letters).

אֵילַת הַשָּׁחַר

You take account of these double letters in your transcription, and you employ bar-lines only to indicate the end of a Hebrew word.



This ten-note melodic fragment strikes you as perfectly credible, and even as memorable. Its first five notes sound the D minor arpeggio, much as the first four notes of 'Morning has broken' sound the C major arpeggio. The interval of a minor seventh between the eight and ninth notes doesn't worry you. [Here and henceforth I deliberately ask readers to count the notes of melodies for themselves.] 'Silent Night' has a minor seventh between *its* eighth and ninth notes. You feel encouraged. Then you recall Psalm 60's floral exhibit in the case, the lily of testimony, and you transcribe the two Hebrew words which the AV renders 'Shushan-eduth' (= shin-wau-shin-nun ayin-daleth-wau-tau).

שׁוֹשַׁן עֲדוּת



Once again, you think, a credible fragment. The last three notes sound the G major arpeggio. But are they really *the last* three notes? Is it possible that the next three Hebrew words (= AV, Michtam of David, to teach) continue the notation-mnemonic?

שׁוֹשַׁן עֲדוּת מִכְתָּם לְדוֹד לְלַמֵּד

The three words are spelled mem-kaph-tau-mem lamedh-daleth-wau-daleth lamedh-lamedh-mem-mem-daleth (the penultimate character stands for a double letter). You transcribe these three words, and add them on to your transcription of Shushan-eduth.



By now you're beginning to wonder about the psalms which have no mysterious headings. Is it possible that in some cases the tunes are hidden in particular verses? Could such verses both mean what they mean in Hebrew, and constitute the notated forms of melodies? You happen to recall what Lawrence Zalcman observed in 'Death and the Calendar' [*Hebrew University Studies in Literature and the Arts* 16 (1988), 99].

.....Italian Jewish poets of the early modern period wrote poems which could be read in both Hebrew and Italian.....

In the same moment you remember a phrase from Vergil. While the two words *IT COMES* may be construed as a plausible part of an English sentence, they are also the first two words of *Aeneid* 6. 159:

IT COMES et paribus curis vestigia figit

(= [Achates] walked along beside [Aeneas] at a pace which accorded with his leader's mood).

Vergil's flashy bit of English is a mere accident. Yet the innocent Latin phrase leads you to consider what an author may do *deliberately*.

THE OBSCURE POETRY OF LOUIS D'ANTIN VAN ROOTEN

Don't try to translate the eight lines which follow. Try to read them aloud.

*Et qui rit des curés d'Oc?
De Meuse raines, houp! de cloques.
De quelles loques ce turque coin,
Et ne d'anes ni rennes,
Écuries des curés d'Oc.*

*Lille beau pipe
Ocelot serre chypre
En douzaine au verres tuffe indemne.....*

If you're lost, read backward the letters **OBELTTILDNAYROKCIDYROKCIH**.

Is it possible to write Hebrew which can also be read as Italian? Then it is possible to write Hebrew which can also be read as musical notation. English experiments along these lines are doomed to

be caged in **a bad café** and **fed agèd beef** or **faded cabbage**, but a system employing the whole English alphabet would let you have everything from anchovies to zwiebacks.

What should you do, then? Learn off your own putative notation-system, and sing your way through some of the psalms. You prepare yourself to find three kinds of melody: definitely not, perhaps, and definitely. At once you are struck by another sentence of Corb (*Le Modulor*, 34):

Autant de propos anathèmes! What a lot of dreadful ideas!

The experiment which you're about to conduct is perilous. While your numerical discoveries in Psalm 49 are indisputable, and while your notation-system is credible, the question of what is musical and what is not is too big to be answered by one person sitting in a study. You're in danger of rejecting genuine melodies -- and worse, of accepting spurious melodies -- on the grounds of your own notions and tastes.

The mere fact that you learned to read in school doesn't qualify you to distinguish between good and bad literature. (A note for certain acquaintances of mine.) Likewise, the mere fact that you're able to hear doesn't qualify you to distinguish between good and bad music. (Another note for certain acquaintances of mine.)

You need a group of **BROADLY LITERATE MUSICIANS** who will test any psalm-tune that you discover *by performing it*.

'What does a broad musical literacy involve?' Rosie asks innocently.

Let me put the answer to that question in a box.

Ancient Greek music. Medieval, Renaissance, baroque, classical, romantic, and modern music of Europe (north, south, east, and west). The world of accordion, brass, flute, military, and pipe bands. Scottish pibroch music. Music of Africa, Arabia, Australia, Central Asia, China, Georgia, Iceland, India, Indonesia, Japan, North and South America, Tibet, and Vietnam *for a start*. Folk music of the world. Country-and-Western. Vintage jazz. Good bits of the pop world: everything from Vaughn DeLeath to Nik Kershaw, and beyond. Different kinds of church music: Eastern Orthodox chant, plainsong from Solesmes, Reformed Presbyterian psalm-singing, Anglican canticles, psalms from the Isle of Lewis, and 'The Sacred Harp' of the American south. Music of Friedrich Nietzsche and Ezra Pound. Bell-ringing of all kinds.

People who wants to learn are prepared to *range widely*. [When you study the unbounded spectrum of world music, you open up untilled tracts of your own mind, and you make it easier for yourself to discover things outside the world of music. 'Nonsense!' cries Dr Cadaver, WHO HAS NEVER FOUND OUT ANYTHING.] **Have you taken the trouble to learn the melodies of many different cultures and centuries? Then you'll be more qualified to judge the melodies of ancient Israel.**

Every human being comes from some particular branch of the same human family. When we meet אליהו התשבתי מתשבתי גלעד (= Elijah the Tishbite, who was of the inhabitants of Gilead) in I Kings 17. 1, and when we meet Кыргызлардын Кожожаш (= Kozhozhash of the Kytai tribe) in the Kyrgyz epic which bears his name, we are meeting our human cousins. You know what the Roman dramatist Terence said:

homo sum: humani nil a me alienum puto

(= I am human, so I reckon that nothing human is foreign to me).

Kinship needs to be worked at. The first time you hear a piece of music you may be fascinated, or surprised, or even repelled by its apparent strangeness.

(In truth there are no authentic musical things which are 'strange', or 'bizarre', or 'exotic', or 'outlandish': there is only ignorance.)

Enlarge the place of thy tent. If you take time to work at a new piece of music, repulsion may cross the bridge of acceptance to become affection.

Don't expect it to happen in every case! The proof that you have a healthy critical faculty is that you never come to accept certain musical things. One example: the tedious hymn-tune *Piety*. Another example: the worm-like melody of 'Drink to me only with thine eyes'. (Was there ever a stupider *text*? You may as well say, 'Walk to me only on thine ears'.)

There's a lot of arpeggiation here: seven notes of F major between notes 8 and 14, five notes of B diminished between notes 15 and 19, four notes of D minor between notes 29 and 32, another seven notes of F major between notes 34 and 40, plus three notes of G major at the very end. You observe in addition that notes 44 to 47 echo the pitches of notes 41 to 43 (solo after a tutti?).

Then you notice a curious thing about the text. You've transcribed Psalm 124 from an 1898 Hebrew Bible published in Vienna by Adam Holzhausen. In that version the Hebrew word rendered 'If it had not been' in the AV is given two different spellings. It is spelled lamedh-wau-lamedh-YODH in verse 1 (below, left). In verse 2 it is spelled lamedh-wau-lamedh-ALEPH (below, right).

לולי לולא

You decide that since there's no obvious difference in sound between the word's two forms, the 'single Alif' is a clue to the musical subtext of Psalm 124. Its purpose is *melodic variation*. Every other Hebrew Bible that you have in the house spells the word lamedh-wau-lamedh-YODH both times, but your experience of world literature inclines you to prefer the more difficult reading (two different spellings). David also uses the spelling with aleph in verse 13 of Psalm 27.

לולא האמנתי לראות בטוב-יהוה בארץ חיים

(= [I had fainted,] **UNLESS** I had believed to see the
goodness of the LORD in the land of the living).

Apart from that, you've noticed David using a variant spelling before. You recall how in II Samuel 22. 1 he spells the word for *him* aleph-tau-wau, whereas in Psalm 18. 1 (the parallel passage) he spells it aleph-WAU-tau-wau. A competent writer does things for a reason. A competent reader looks for the reason.

Anyway, you've found the tune of Psalm 124. It contains plenty of arpeggiation, a moment of echo, and a piece of melodic variation. But is it a good tune? It certainly is. The interval of a minor seventh between notes 20 and 21 is no more of a problem than it is in the twenty-seven hymn-tunes *Abbot's Leigh, Agnus, All Hallows, Austria, Bede, Benifold, Cameronian Midnight Hymn, Colchester, Confidence, Cornwall, Doncaster, Edina, Helmsley, Living Lord, Omnipotence, Palms of Glory, Pilgrimage, Richmond, St Drostane, St Edmund, Silent Night, Truro, Tyrol, Woodlands, Desiring to love, Gopsal, and Sursum corda*, or in the Icelandic melodies *Hvér er sá heimi í, Andleg skáldin iðka mest, Allra hlutanna er upphaf, and Ó guð, ó Jesú Kristi* (ÍP: respectively 233, 254, 299-300, and 331). The Icelandic tunes *Meyjan mektuglega* and *Guð, vor faðir* (ÍP: respectively 242 and 718) even include examples of the *major* seventh! So if people object to the minor seventh in the melody of Psalm 124, you'll feel like asking them two questions. First, how much music have they ever SUNG? Secondly, how much music do they actually KNOW?

No one should object to the bit of B diminished arpeggiation between notes 15 and 18. You recall how the B diminished arpeggio is used in the bassus line of the Icelandic duets *Ó, mín hjartans ástar baugabré, Vorið langt, and Mína þá*

mundi' eg penja vængi út (ÍP: respectively 776, 777-8, and 782). You sing the opening of *Vorið langt's* bassus part.



Of course one culture's mode of thought may differ from that of another. While in 'Reinhold and Angelika' the German poet Ludwig Heinrich von Nicolay can say *Neun Kühe* (= nine cows), and while in *Iliad* VI. 174 Homer can say *εννεα βους* (= nine oxen), a Bengali speaker who wants to say *nine cows* must insert between numeral and noun the 'measure-word' টা (*ṭa*), thus:

নয়টা গরু (*nôe-ṭa goru* = nine [measure-word] cows).

By contrast, the pieces of music which you have adduced present us with *parallels of possibility*. Were the Psalmists aliens? No! They were humans like us who ate bread, slept in beds, and used the white-note scale of D. The people whom Francesco Artico, writing in the Venetian language, calls *Sti cantori vèci da na volta* (= These old choristers of the past) were HUMAN. God hath made of one blood all nations of men. [The Latin word *arcanus* (= secret) derives from the Latin word *arca* (= box), and the Nahuatl phrase *in toptli, in petlacalli* (literally = the chest, the box) denotes 'something secret'.] **Nothing that British or American congregations can do today, nothing that Icelandic singers could do in the nineteenth century, would have been too hard for David and his musicians.**

Anyway, the tune of Psalm 124 is not hard to sing. Neither is the tune that comes out of Psalm 81, which was written by Asaph. Psalm 81 begins with a number of musical imperations.

Sing aloud unto God our strength: make a joyful noise unto the God of Jacob. Take a psalm, and bring hither the timbrel, the pleasant harp with the psaltery. Blow up the trumpet in the new moon, in the time appointed, on our solemn feast day.

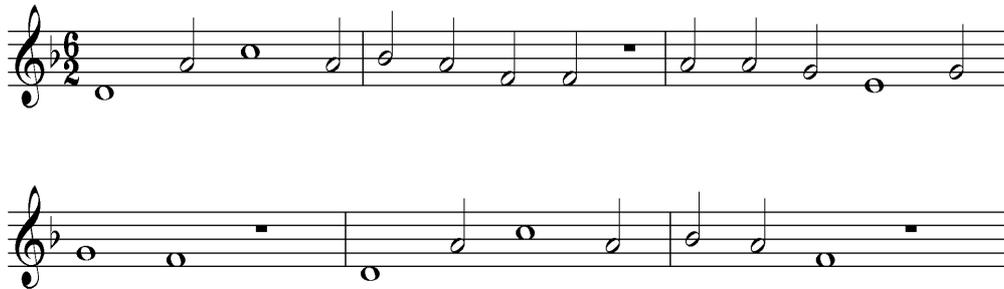
Applying your notation-system once again, you sing through the Hebrew text of Psalm 81. When you come to verse 10 (= AV verse 9).....

לא יהיה בכ אל זר ולא תשתחוו לאל נכר

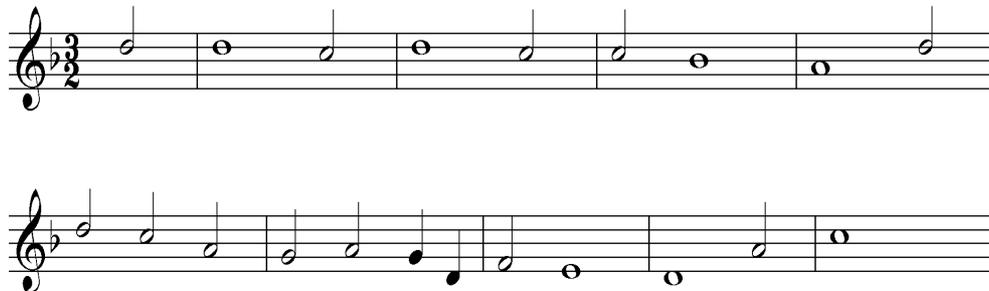
.....you find that it transcribes as follows.



The first six notes sound the D minor arpeggio; there is a deliberate build-up to a medial climax on the sixteenth note; and the whole tune has a great rhythmical impact. Unlike many modern hymn-tunes, the melody is sturdy and memorable. Asaph's double use of the pitches *d a c'* (respectively notes 9-10-11 and notes 23-24-25) creates a feeling of taut melodic construction. There's nothing unlikely or difficult about the *d a c'* phrase. You remember the first six bars of the Icelandic tune *Eljakvæði* (*ÍP*, 519):



You also recall notes 19-20-21 of the English hymn-tune *Agincourt*:



You've no doubt that verse 10 contains the tune, but you wonder whether the fact is indicated by anything apart from its obvious tunefulness. Psalm 124 was written by David, whose name in 400 and 22 Hebrew gematria has a gematric value of fourteen. The *tune* of Psalm 124, which employs a total of fourteen words, starts on the fourteenth character of the psalm. You can't see anything similar in Psalm 81, although one thing does strike you as rather obvious.

The psalm in English begins, 'Sing aloud unto God.....' If the title is left aside, 'Sing aloud' translates the psalm's first Hebrew word, and 'unto God' translates its second Hebrew word. The word rendered 'unto God' begins with the letters lamedh-aleph, and so does verse 10 in Hebrew. In fact, verse 10 is the only verse of the psalm which begins with the letters lamedh-aleph. So the opening 'Sing aloud lamedh-aleph.....' may indicate that the tune, the thing which actually has to be sung aloud, begins with these two letters. That strikes you as a sufficient indication. The lamedh-aleph pointer is neat and simple. It's almost as if an English poem began with the words 'Sing loud', and the verse containing the tune began with the word 'Lo!'.

That reminds you.

Begin, and somewhat loudly sweep the string.....

Where do those words come from? From Milton's poem 'Lycidas' (line 17). No melody is encrypted in any line of 'Lycidas', but the poem is a lament for the death of Edward King, and it makes you think at once of two secular laments written by David.

The lament for Abner is found in II Samuel 3. 33-34.

And the king lamented over Abner, and said, Died Abner as a fool dieth? Thy hands were not bound, nor thy feet put into fetters: as a man falleth before wicked men, so fellest thou. And all the people wept again over him.

David's short lament was written so that it would be remembered after only a single hearing. Look at the Hebrew words which were actually sung. (Verse 33's last four words = line 1, and verse 34's first twelve words = lines 2 and 3.)

הכמות נבל ימות אבנר

(= Died Abner as a fool dieth?)

ידך לא אסרות ורגליך לא לנחשתים

הגשו כנפול לפני בני עולה נפלת

(= Thy hands were not bound, nor thy feet put into fetters:
as a man falleth before wicked men, so fellest thou.)

Imagine that the last four words of verse 33 (= *Died Abner as a fool dieth?*) had been omitted from the Hebrew text of II Samuel 3. Even if the best Hebraists in the world worked for a hundred years to restore the missing words, and even if they knew the approximate sense of the missing words (*Abner died because he was too trustful*), they would never come up with the astonishing piece of language that David has created.

'Yes,' says Delia. 'I reckon that the last four words of verse 33 constitute a sixteen-character melodic cryptogram.' She pauses. 'The lament contains sixteen Hebrew words, or thirty-nine syllables. Here.....'

'How do you know about the number of syllables, dear?' asks Rosie in surprise.

'Never mind,' Miss Benn replies blithely. 'Look at the very simple transliteration that I've written down here.' She points to a page of her notebook. 'CH is pronounced like CH in *Bach*. DH is a harder version of the TH in *thing*. If TH is a lisped S, DH is a lisped Z. GH is pronounced like G in *Borges*. U is pronounced like the U in PULL, not DULL. I've done everything to make things easy for singers. There are no diacritical marks.' Delia pauses. 'I haven't even tried to show what the original letters were.'

Hakkemoth naval yamuth Avner? Yadhecha lo
asuroth, weraghleycha lo linchushtayim hugashu:
kinfol lifney veney awla, nafalta.

'You mentioned a *sixteen-character* melodic cryptogram,' says Rosie. 'How did David adapt his sixteen characters to a text of thirty-nine syllables?'

'He used them two-and-a-bit times, starting with the bit,' Delia answers. 'The last five characters, plus sixteen, plus sixteen, add up to thirty-seven, which is the 22-

gematric value of Abner (aleph-beth-nun-resh). But the second character, kaph, is actually a double letter. That's why you end up with thirty-nine melodic notes.' She points to a line of Hebrew letters. 'Read from the right, ye adepts.'

ת אבנר הככמות נבל ימות אבנר הככמות נבל ימות אבנר

'How do you know to start on the fifth character from the end?' asks Rosie.

'I don't exactly *know*,' Delia replies. 'But if you start on the first of the sixteen musical letters, and take account of the double kaph, the last note of your lament will be a one-beat b, which sounds odd to me. Start on the twelfth of the musical letters, and you end on a *three-beat b*.'

'That makes sense,' says Rosie.

'What sort of tune do the thirty-nine letters produce?' you ask.

'A haunting tune, which I've transcribed.' Delia turns a page. 'We're going to sing it now. Over and over again, until we all *know* it. We'll practise it at least twenty times. Then we'll go out to the garden for a while. When we come back inside, we'll practise the tune another twenty times.' She pauses. 'Only the most helplessly stupid and idle TRAMP would presume to judge an ancient melody after hearing it once. I mean, you can't judge something that you don't *know*.'

While we're practising Delia's transcription of the lament for Abner, my musical readers can decode its melody for themselves. Here once again are the thirty-nine note-letters, which you should read with a magnifying glass.....

ת אבנר הככמות נבל ימות אבנר הככמות נבל ימות אבנר

....and here's the notation-system.



aleph beth gimel daled he waw zayin cheth teth yodh kaph lamedh mem nun



samekh ayin pe tzaddi qoph resh s(h)in tau

Start transcribing the tune-letters from the right, and write the thirty-nine syllables of Hebrew text underneath them. Then sing the lament, and ask yourself if it sounds like what it's supposed to be.

Two of my interlocutors are impressed by the condign quality of David's music.

'I feel as if we were present at Abner's funeral,' says Rosie.

'Yes. It sounds foolish, but I feel as if I'd got out of a time-machine,' says Delia.

That is actually a sensible thing to say, because music does enable you to travel back in time. You may not be able to understand the original words of an ancient song. You may not know exactly how the original words were pronounced. But when you sing the original *notes*, you establish a communion with the singers of antiquity which goes beyond even spoken language.

Behold! A New Testament commentator called Tony Scip has entered the room.

‘Think about the language of the four musical words for a moment,’ says Miss Benn, producing a large bag from under the table. ‘We know what the words mean. *Died Abner as a fool dieth?* And we know that Abner was murdered by Joab.’ She pauses. ‘Is it possible that David has encrypted the name of Joab in the text of his lament? Look at the four large letters in the last two words.’ Delia points to a page of her notebook.

הכמות נבל ימות אבנר

‘Those letters are yodh, wau, aleph, beth,’ Miss Benn continues, ‘and they spell the name of *Joab* in Hebrew. Do they represent a deliberate authorial act?’

I reckon that they do. And there may be another deliberate cryptogram in the complete text of the lament. Let me allude briefly to a matter which badly needs a book of its own. The poets of ancient Israel didn’t use rhyme or regular metre, but they took enormous pains with the placement of their differently coloured vowels. Look at Delia’s transliteration of the lament for Abner, in which I have underlined five letters. The lament comprises thirty-nine syllables.

Hakkemoth naval yamuth Avner? Yadhecha lo asuroth, weraghleycha lo
linchushtayim hugashu: kinfol lifney veney awla, nafalta.

Five of these syllables involve the O-sound of Joab’s name: the third, thirteenth, sixteenth, twenty-first, and thirtieth syllables. The sum of the five numbers three, thirteen, sixteen, twenty-one, and thirty is eighty-three, which is the 400-gematric value of the Hebrew phrase *daleth-yodh-nun yodh-wau-aleph-beth* (= the judgment of Joab), and the 22-gematric value of the Hebrew phrase *ayin-lamedh mem-wau-tau daleth-wau-daleth* (= upon the death of David).

‘Then when he composed the lament for Abner,’ says Miss Benn, ‘the king was setting Joab’s final judgement in place -- as *something which would have to be carried out once David himself was dead.*’

I’m inclined to think so. Because the eighty-three comes back at the very end of Joab’s saga. In I Kings 2. 34 we read of Joab,

So Benaiah the son of Jehoiada went up, and fell upon him, and slew him: and he was buried IN HIS OWN HOUSE IN THE WILDERNESS.

That mysterious phrase *IN HIS OWN HOUSE IN THE WILDERNESS* renders the Hebrew *beth-beth-yodh-tau-wau beth-mem-daleth-beth-resh*, which has a total 22-gematric value of eighty-three.

בביתו במדבר [2 + 2 + 10 + 22 + 6] + [2 + 13 + 4 + 2 + 20] = 83

‘Oh, get real!’ shouts Tony Scip. ‘Your lunatic eighty-threes are bad enough. I mean, what’s the big deal about eighty-three? But that O-business is far worse. I

can hardly believe that you're serious. The idea of poets solemnly counting their O-vowels is altogether INSANE.'

'So it appears to you, Tony.' Miss Benn is holding a great shell-trumpet in her hands. 'The problem is that you know *nothing whatever about poetry.*' She pauses. 'Imagine an alien from some distant planet who lands on a tellurian soccer-pitch while a match is being played. He complains that twenty-three absurdly costumed beings are engaging in an orgy of communal madness. And he can't see what the big deal is about twenty-three. That's what you're like.' Delia blows a powerful *d'* on the conch, and then continues. 'You've never played the game, and you don't know the rules of the game, so you pronounce the game to be lunacy, and you declare that its players are insane. I feel genuinely sorry for you. Your mental anatomy is so preternaturally deficient.'

'*Deficient.*' Tony Scip stares at the actress for a moment. Then he bursts out laughing. 'I beg your pardon, everyone. Don't think I meant to be rude. But I simply can't believe what you're saying.' He pauses. 'Take the O-business. All right, I plead guilty as charged. I'm an alien. I'm ignorant. I'm deficient. Well, help me! Minister to my ignorance. Will you be good enough to show me a few non-ancient poems that are positively *bejewelled* with important Os?'

(T S Eliot would say, *O O O O that Shakespeherian Rag!*) Yes, of course. Here is '!', by e. e. cummings. When you read '!' out loud, your lips must be repeatedly 'rounded' in order to produce the many O-vowels which the poem contains.

!
o(round)moon, how
do
you(rouNd
er
than roUnd)float:
who
lly &(rOunder than)
go
:lidenly(Round
est)
?

Here are three lines from Arthur Rimbaud's poem '*Voyelles*' (= Vowels). The translator must take care to have exactly as many O-vowels as Rimbaud.

⊙, *suprême Clairon plein des strideurs étranges,
Silences traversés des [Mondes et des Anges]:*
-- ⊙ *l'Oméga, rayon violet de [Ses] Yeux!*

⊙, Last Trumpet filled with strange and strident notes,
Silences through which the [Planets and the Angels] travel:
-- ⊙ Omega, violet ray of [His] Eyes!

What's the matter now? Oh, Tony Scip is requesting that we confine ourselves to *English* verse. No problem! We'll go on to look at William Blake's poem 'The Sick Rose'. Note that the 'worm' which Blake mentions is a winged creature.

Teachers regularly ask their students both to count the number of Os in 'The Sick Rose', and to say why Blake has used the O-vowel so often.

*O Rose, thou art sick!
The invisible worm
That flies in the night,
In the howling storm,
Has found out thy bed
Of crimson joy,
And his dark secret love
Does thy life destroy.*

Here are fifteen lines from Carl Sandburg's poem 'Theme in yellow'. You can see how the artfully placed Os act as pumpkin-pictograms.

*I spot the hills
With yellow balls in autumn.
I light the prairie cornfields
Orange and tawny gold clusters
And I am called pumpkins.
On the last of October
When dusk is fallen
Children join hands
And circle round me
Singing ghost songs
And love to the harvest moon;
I am a jack-o'-lantern
With terrible teeth
And the children know
I am fooling.*

Here is the opening of 'The O Store' by Catherine Bowman.

*At the O store we sell O in O-abundance.
Big O's and little O's. Oceans whole or by the O-pot.
Choice perfect O's. Heaven knows. Made in In-
Donesia, odorless or aromatic.....*

Here are five lines from the poem 'O', by Robert Graves.

*"O per se O, O per se O!",
The moribund grammarian cried
To certain scholars grouped at his bedside,
Spying the round, dark pit a-gape below:
"O per se O!"*

Now we can turn our attention to a musical composition which is found in II Samuel 1. 19-27. The AV renders its nine verses as follows.

*The beauty of Israel is slain upon thy high places: how are the mighty fallen!
Tell it not in Gath, publish it not in the streets of Askelon; lest the daughters
of the Philistines rejoice, lest the daughters of the uncircumcised triumph.
Ye mountains of Gilboa, let there be no dew, neither let there be rain, upon
you, nor fields of offerings: for there the shield of the mighty is vilely cast
away, the shield of Saul, as though he had not been anointed with oil.*

From the blood of the slain, from the fat of the mighty, the bow of Jonathan turned not back, and the sword of Saul returned not empty.

Saul and Jonathan were lovely and pleasant in their lives, and in their death they were not divided: they were swifter than eagles, they were stronger than lions.

Ye daughters of Israel, weep over Saul, who clothed you in scarlet, with other delights, who put on ornaments of gold upon your apparel.

How are the mighty fallen in the midst of the battle! O Jonathan, thou wast slain in thine high places.

I am distressed for thee, my brother Jonathan: very pleasant hast thou been unto me: thy love to me was wonderful, passing the love of women.

How are the mighty fallen, and the weapons of war perished!

Let me deal quickly with one textual matter before we go back to talking about musical notation. While David awards generous praise both to Saul and to Jonathan, he arranges the thirty O-vowels of his Hebrew text so as to encrypt a celebrated verse of blessing (Numbers 6. 26).

The eight verses of the song-text – verses 19, 20, 21, 22, 23, 24, 25, 26, and 27 -- contain O-vowels as follows:

19: **2** 20: **5** 21: **3** 22: **6** 23: **4** 24: **1** 25: **4** 26: **3** 27: **2**

When the nine numbers 2 5 3 6 4 1 4 3 2 are interpreted

$$253 + 641 + 432 = 1326,$$

they yield the total 400 gematric value of Numbers 6. 26.

ישא יהוה פניו אליך וישם לך שלום

The LORD lift up his countenance upon thee, and give thee peace.

Numbers 6. 26 is one of the best-known verses in the Hebrew Bible. Its seven Hebrew words have 400 gematric values respectively as follows:

311 26 146 61 356 50 376

David would certainly have noticed that the gematric values of the first two words add up to 337, which is the 400 gematric value of SAUL (shin-aleph-wau-lamedh). He would also have noticed that the first letters of the fourth, fifth, sixth and seventh words are respectively aleph, wau, lamedh, and shin.....

ישא יהוה פניו אליך וישם לך שלום

.....and that these four letters may be arranged to spell the name of SAUL.

ש א ו ל

Only when we look beneath the surface of the lament for Saul and Jonathan do we discern the astonishing extent of David's magnanimity. While Jonathan is praised openly for his loyal affection, Saul is favoured with a cryptical *requiescat* in which all thirty of the lament's O-vowels are involved.

2 5 3 6 4 1 4 3 2

I wonder if *the Holy Ghost by the mouth of David* is telling us that Saul was reconciled to God in the moment preceding his death. In such a case, the words that David uses about Saul and Jonathan – *in death they were not divided* -- take on a hue of meliority.

‘Hold on,’ says Tony Scip, who has opened a Hebrew Bible. ‘You’re saying that there are three O-vowels in verse 26.’ He pauses. ‘I can see only two.’

Look at the last of the thirteen Hebrew words which verse 26 contains. That word is spelled nun-shin-yodh-mem.

צַר לִי עֲלֶיךָ אַחֵי יְהוֹנָתָן-נְעֻמָּת לִי מְאֹד נִפְלְאָתָה אֶהְבֵּתְךָ לִי מֵאַהֲבַת נְשִׁיִם

‘The word in question is pronounced NASHIM,’ says Scip, ‘and it means *women*.’

No. It should be pronounced NOSHIM, and it means *selfish grabbers*. Listen! A great deal depends on whether we read NASHIM or NOSHIM. During my lifetime II Samuel 1. 26 has been much quoted by people who want to colonize the past in the name of their own notions. Let us examine the verse carefully.

We have to be unafraid of what the Bible actually says. To wrest the Scriptures is to destroy oneself (II Peter 3. 16). We can’t approach ANY Biblical passage with a bowdleristic intention. We can’t twist ANY piece of the Biblical text in an attempt to spike the guns of particular exegetes. And we can’t change the plain meaning of ANY Biblical word in order to make timorous people feel comfortable. Poti-pherah in Genesis 41. 45 was *priest* of On, not *prince* of On. The people in Exodus 32. 25 were *naked*, not merely *out of control*. In John 2. 4 γυναίκα means *woman*, not *dear lady*. In the original of Matthew 16. 18 the word και (= and) materially links Πέτρος (= Peter) with πέτρα (= rock). The masculine-gender word Πέτρος denotes that Peter is male, and it doesn’t mean *pebble*. Furthermore, to speak of Peter’s ‘confession’ is to import a fatuous unBiblical cuckoo. Peter didn’t *confess* in Matthew 16. 16. He *answered* (ἀποκριθεὶς).

That fact is significant. The dative singular form of the noun ἀποκρισις (= answer), which we find in Luke 20. 26, has an 800 Greek gematric value of 496. So does the dative singular form of the noun πέτρα which we find in Matthew 16. 18. **The Lord Jesus Christ will build his church on Peter’s ANSWER.** [Some people believe that anything related to *rock* in the New Testament personally denotes the Messiah. They are wrong. The *rock* of Luke 8. 6 (πέτρῳ) is not a Messianic rock, and the *rocks* of Revelation 6. 16 (πέτραις) are not Messianic rocks.] **We need to work hard at the semi-gematric word-play of Matthew 16. 18.** Setting aside the superstition that the Lord Jesus always addressed his disciples in Aramaic, look at the word πέτρα, which includes most of the letters of πατήρ (= father). When God the Father enables Peter to answer a question about the identity of the Lord Jesus Christ, an enormous triangular mass of living rock – four hundred and sixty-five hexagonal nineteens -- is brought instantaneously into existence, almost in the manner of the Giant’s Causeway. (I’m talking about the 800 Greek gematric value of Matthew 16. 16.) Let me repeat that the Lord Jesus will build his church on Peter’s ANSWER. Matthew 3. 9 tells us what God can do with **stones**. Note that the ANSWER which Thomas gives to the Lord Jesus in John 20. 28 (Ὁ κυριος μου και ο θεος μου = *My Lord and my God*) adds up in 800 Greek gematria to 2275, which as well as being the sum of the fourth powers of one, two, three, four, five, and six is what mathematicians call the ‘octagonal pyramidal number’ of thirteen.

Read the Bible reverently. Don't live in a pietistic Wendy House. Ephesians 2. 20 tells us that members of the Christian church *are built upon the foundation of the apostles and prophets, JESUS CHRIST HIMSELF BEING THE CHIEF CORNER STONE* (ἀκρογωνιαίος). Revelation 21. 14 tells us that *the wall of the city had twelve foundations, and in them the names of the twelve apostles of the Lamb*. Read the Bible, and welcome complexity. In John 8. 12 the Lord Jesus says, *I am the light of the world*. In Matthew 5. 14 he says, *Ye are the light of the world*. Here is a thrilling fact. If we cooperate fully with God, we'll find that the privilege of causing volcanic activity in the spiritual sphere is not exclusively apostolic. Of course whenever it happens we'll sing the first verse of Psalm 115.

All happy? Then consider FOUR CONSECUTIVE VERSES from II Samuel (AV).

1. 26. *I am distressed for thee, my brother Jonathan: very pleasant hast thou been unto me: thy love to me was wonderful, PASSING THE LOVE OF WOMEN.*

1. 27. *How are the mighty fallen, and the weapons of war perished!*

2. 1. *And it came to pass after this, that David inquired of the LORD, saying, Shall I go up into any of the cities of Judah? And the LORD said unto him, Go up. And David said, Whither shall I go up? And he said, Unto Hebron.*

2. 2. *SO DAVID WENT UP THITHER, AND HIS TWO WIVES ALSO, AHINOAM THE JEZREELITISS, AND ABIGAIL NABAL'S WIFE THE CARMELITE.*

David was WISE enough to write a lament for Saul and Jonathan. He was also SENSIBLE enough not to write a separate lament for Jonathan. It would therefore have been incongruously STUPID for David to set up the love of Jonathan as superior to the love of all women, and by implication to the love of his two wives Ahinoam and Abigail. As it stands, the text of II Samuel 1. 26 in the AV constitutes an insane insult to David's two wives, and to women in general. Remember that David wasn't merely passing some remark in the course of a conversation. He was creating a literary and musical monument.

When you jump down THREE VERSES from II Samuel 1. 26, you find Ahinoam and Abigail amicably going up to Hebron with their husband. What's more, the text has nothing to say about David being reconciled with his two wives after the disgraceful insult which he had dealt them! Well, then. Whatever the ancient versions may say, *II Samuel 1. 26 can't mean what we've always been told it means*. We must read the word nun-shin-yodh-mem, which is normally translated 'women', as *noshim*. What does *noshim* mean? Self-seekers. Extortioners. Usurers. Grabbers. People who have INVESTED in David's cause largely for the sake of their own selfish GAIN. There is a warning in the word *noshim*. When he describes the selfless love of Jonathan as surpassing the 'love' of selfish grabbers, David is serving notice on those of his supporters whose loyalty is largely a matter of self-interest.

'Hold on a moment!' Rosie hands me a blank page. 'Please write down the word *nashim* as David would have written it in our black-letter script, and then write down the word *noshim* as David would have written it in our black-letter script.'

Very well. I'll put *nashim* on the left, and *noshim* on the right.

נָשִׁים

נֹשִׁים

‘Here’s what I’m noticing only now,’ says Delia. ‘Replacing the word *nashim* with the word *noshim* doesn’t merely acquit David of insulting his two wives. It reveals the amazing generosity of David’s feelings about Saul.’

‘I see what you mean, dear,’ says Rosie. ‘Without the O of *noshim*, you would have no 1326, and no cryptic quotation from Numbers 6. 26.’

Correct! Many commentators believe that David’s *nil-nisi-bonum* treatment of Saul is shrewdly political rather than sincere. And most commentators would agree that *The Song of the Bow* is an altogether secular composition. But by concealing the number 1326 in the disposition of his O-vowels, David brings the LORD into the equation of his song-text.

$$2\ 5\ 3\ +\ 6\ 4\ 1\ +\ 4\ 3\ 2\ =\ 1\ 3\ 2\ 6$$

‘I still find it hard to believe that all those numbers could have anything to do with a *poem*,’ says Tony Scip.

‘Then consider the basic plan of a Spenserian sonnet,’ says Delia, ‘and watch.’ Without haste she writes two lines of numbers on one page of her notebook.

$$\begin{array}{ccccccc} 2 & 5 & 10 & 14 & 70 & 140 & 5 \\ 1: 1-3 & 2: 2-4-5-7 & 3: 6-8-9-11 & 4: 10-12 & 5: 13-14 & & \end{array}$$

‘You have TWO syllables in every foot,’ Miss Benn explains, ‘FIVE feet in every line, TEN syllables in every line, FOURTEEN lines in the whole poem, SEVENTY feet in the whole poem, and ONE HUNDRED AND FORTY syllables in the whole poem. Then you have FIVE different rhymes. Rhyme number ONE is used in lines ONE and THREE. Rhyme number TWO is used in lines TWO, FOUR, FIVE, and SEVEN. Rhyme number THREE is used in lines SIX, EIGHT, NINE, and ELEVEN. Rhyme number FOUR is used in lines TEN and TWELVE. Rhyme number FIVE is used in lines THIRTEEN and FOURTEEN.’ Delia looks at Tony fiercely. ‘Do you find it hard to believe that all those numbers could have anything to do with a *poem*?’

‘No.’ Dr Scip speaks in a timid voice. ‘But I’m puzzled about *nashim* and *noshim*. How could one vowel ever have been mistaken for the other?’

You shouldn’t have to ask that question, Tony! In the original consonantal text, the first syllable of the word nun-shin-yodh-mem contained neither an A-vowel nor an O-vowel. Like any other Hebrew writer of the period, David expected his reader to supply the necessary vowel.

Think for a moment in terms of two English place-names. When your great-aunt hears that I’m coming to Lincolnshire, she writes and asks me to visit her in a place called B-?-S-T-O-N. (I can’t make out the second character, because her handwriting is frightful.)

B-?-s-t-o-n

Now the occasional subject of one’s paintings, Cicely Grove, is very enthusiastic about Roman Britain. Cicely is convinced that your revered relative means BASTON, a village on the edge of The Fens, which presently is the object of her

antiquarian interest. In fact, your great-aunt really means the coastal town of BOSTON. (A long time ago, if what I've been told is true, Boston gave its name to some place in Massachusetts.)

'Here's a crossword clue for you, Tony,' says Rosie. 'Two words. Five letters in the first word, and eleven letters in the second word. The answer is a *name*. That's all you're getting.' She passes a small piece of paper to Dr Scip. 'Some of the letters have already been filled in.'

— — — — — S P R I N G — — E — —

'Let me think,' says Tony. 'Is it *Bruce Springsteen*?'

'It certainly could be,' Miss Stone replies. 'It could also be *Dusty Springfield*. Well done!' She pauses. 'Now go to II Samuel 1. 26. A man is writing a Hebrew poem. After mentioning the love of a friend, he mentions the love of some group of people called nun-shin-yodh-mem. But because the man is writing Hebrew around 1000 BC, *he doesn't supply the first syllable of nun-shin-yodh-mem with a vowel*. He relies on his readers to supply that vowel.' Rosie takes a notebook from her handbag. 'You can put money on what I'm going to say next. When many of those readers see the Hebrew word for LOVE, together with the word nun-shin-yodh-mem, they'll immediately think of *nashim*, which means WOMEN. They won't think of *noshim*, which means GRABBERS. Yet the word that seems at first to make obvious sense turns the whole sentence into an unthinkable absurdity.' Miss Stone opens her notebook. 'Go back to the crossword clue that I gave you, Tony. Whom was I really thinking about when I made up that clue? Not Bruce Springsteen, and not Dusty Springfield, but *Marty Springstead*, who used to be an umpire in Major League Baseball.'

'The most obvious answer isn't necessarily the right answer,' Delia observes.

'*Lectio difficilior potior!*' says Tony. 'That's an important principle of textual criticism. The more difficult of two readings is likely to be the stronger reading.' He pauses. 'Tell me something. Does the word *noshim* occur anywhere else in the Old Testament?'

It does. The word *noshim* (= 'grabbers' in II Samuel 1. 26), derived from the root nun-shin-he, is attested as a plural form of the participle in Nehemiah 5. 10-11.

Here is part of Nehemiah 5. 10.

וּגַם אֲנִי אַחֵי וְנַעֲרֵי נֹשִׁים בְּהֵם כֶּסֶף

(= I likewise, and my brethren, and my servants, might exact of them money).

Here is part of Nehemiah 5. 11.

הַתִּירוֹשׁ וְהַיִּצְהָר אֲשֶׁר אַתֶּם נֹשִׁים בְּהֵם

(= the wine, and the oil, that ye exact of them).

The verb nun-shin-he is also used in Nehemiah 5. 7 (*Ye exact usury, every one of his brother*).

In II Samuel 1. 26 David calls Jonathan MY BROTHER before contrasting the affection of Jonathan with that of the USURERS, or self-interested persons.

In Psalm 109. 4-5 (AV) David speaks about people who have treated him treacherously. The *love* which he mentions twice is completely unromantic.

(For my LOVE they are my adversaries.....

.....they have rewarded me evil for good, and hatred for my LOVE.

In verse 10 of the same psalm David says of a particular traitor,

Let the EXTORTIONER (גִּזְעָה: nun-wau-shin-he) catch all that he hath.....

We don't need to multiply words. In II Samuel 1. 26 Jonathan's selfless love is contrasted with the love of people who have INVESTED in David's cause largely for the sake of their own selfish GAIN.

These people are called *noshim* (nun-shin-yodh-mem), and in 400 Hebrew gematria the word *noshim* adds up to four hundred.

If we want to see the point of that numerical fact, we must read I Samuel 30. 9, 10, 18, 19, 20, 21, 22, and 23.

9. So David went, he and the six hundred men that were with him, and came to the brook Besor, where those that were left behind stayed.

10. But David pursued, he and FOUR HUNDRED MEN: for two hundred abode behind, which were so faint that they could not go over the brook Besor.

18. And David recovered all that the Amalekites had carried away: and David rescued his two wives.

19. And there was nothing lacking to them, neither small nor great, neither sons nor daughters, neither spoil, nor any thing that they had taken to them: David recovered all.

20. And David took all the flocks and the herds, which they drave before those other cattle, and said, This is David's spoil.

21. And David came to the TWO HUNDRED MEN, which were so faint that they could not follow David, whom they had made also to abide at the brook Besor: and they went forth to meet David, and to meet the people that were with him: and when David came near to the people, he saluted them.

22. Then answered all the wicked men and men of Belial, of those that went with David, and said, Because they went not with us, we will not give them ought of the spoil that we have recovered, save to every man his wife and his children, that they may lead them away, and depart.

23. Then said David, Ye shall not do so, my brethren, with that which the LORD hath given us, who hath preserved us, and delivered the company that came against us into our hand.

Those who act as spokesmen for the FOUR HUNDRED in this tale are *noshim*: extortioners, or selfish grabbers. Notice the word *all* in verse 22.

Then answered ALL the wicked men and men of Belial.....

Quite a lot of them, you would say.

Let me summarize the last few pages by translating into English five Hebrew words from II Samuel 1. 26.

נפלאה אהבתך לי מאהבת נשים

Your love for me was wonderful, as distinct from the 'love' of selfish GRABBERS.

Now we'll return to the matter of musical notation. Verses 17 and 18 of II Samuel 1 read in the AV as follows.

And David lamented with this lamentation over Saul and over Jonathan his son:

(Also he bade them teach the children of Judah the use of the bow: behold, it is written in the book of Jasher.)

Three supplied words in verse 18 – *the use of* – represent a misunderstanding on the part of the translators.

Verse 18 doesn't mean that David ordered the children of Judah to be taught archery, and that the details of his command are recorded in the book of Jasher.

It really means that David ordered the children of Judah to be taught 'this lamentation' (verse 17), entitled *The Bow*, and that the lamentation is also recorded in the book of Jasher.

Here's a modern parallel.

And the poet Edward Thomas wrote this poem:

(Also he bade them teach the children of England the trumpet: behold, it is written in the Albatross Book of Living Verse.)

*Rise up, rise up,
And, as the trumpet blowing
Chases the dreams of men.....*

What were the children of England to be taught? Trumpet-playing? No! They were to be taught a poem by Edward Thomas called 'The Trumpet'. For their part, the children of Judah were to be taught a song by David called 'The Bow'.

By way of experiment you apply the notation-system to the Hebrew text of verses 19, 20, 21, 23, 24, 25, 26, and 27.

Not one of these verses transcribes as an obviously credible melody.

But verse 22, the only verse which contains the word bow (qoph-shin-tau), is different. Note that the second character in the first word, like the second character in the fourth word, stands for a double letter.

מדם חללים מחלב גבורים קשת יהונתן

(= *From the blood of the slain, from the fat of the mighty, the bow of Jonathan*

לא נשוג אחור וחרב שאול לא תשוב ריקם

turned not back, and the sword of Saul returned not empty).

The titular word *bow* (qoph-shin-tau) is a musical pointer to verse 22, which transcribes as the amazing melody which follows.



What we have here could almost be a pibroch lament. The tritone, which occurs no less than five times, is used with great deliberateness. There are in addition two notable pairs of melodic pillars. First, notes 4-5-6 are identical to notes 10-11-12. Secondly, the pitches of notes 21-22-23 are transposed down a third to give the last three pitches of the tune. The plangent tension created by notes 1 to 20, which are all contained by the interval of a sixth, is released by notes 21-22-23. These three notes represent the Hebrew word for 'bow', and they constitute a medial climax. The pitch-contour of notes 33 to 39 (c', descending B diminished arpeggio, and two bs).....



.....corresponds with that of Psalm 124's notes 14 to 19.



No one should be surprised. Psalm 124 was also written by David!

A deliberate use of the melodic sixth characterizes notes 37-38-39-40-41-42, and prepares us for the octave leap of the final climax (notes 49-50).

'We should sing the melody through to *la*,' says Rosie.

'At least *seven times*,' says Delia.

Very well. We'll try it at two-beat note = 72.

What verdict do we eventually arrive at?

'Overall,' says Rosie, 'the melody is a very satisfying piece of musical architecture.'

‘It really does sound like a *lament*,’ says Tony Scip. ‘But here’s what I’d like to know. Does any hint of David’s notation-system appear in the Biblical text?’

‘Let’s look and see,’ says Rosie.

All right! First we need to decide what we’re looking for. We believe that each of the notes *d*, *e*, *f*, *g*, *a*, *b*, and *c*’ can be represented by three different letters denoting three different time-lengths. (Aleph stands for one-beat *d*, cheth stands for two-beat *d*, samekh stands for three-beat *d*, and so on.) We also believe that the note *d*’ is always a three-beat note and always represented by the same letter (tau). In a parallel *English* musical alphabet of twenty-two letters, running from A to V, the three different time-lengths of the notes *d*, *e*, *f*, *g*, *a*, *b*, and *c*’ would be represented as follows.

| | | |
|------------|---|--|
| <i>d</i> | = | A H O (one-beat <i>d</i> = A, two-beat <i>d</i> = H, three-beat <i>d</i> = O); |
| <i>e</i> | = | B I P; |
| <i>f</i> | = | C J Q; |
| <i>g</i> | = | D K R; |
| <i>a</i> | = | E L S; |
| <i>b</i> | = | F M T; |
| <i>c</i> ’ | = | G N U. |

The note *d*’, always a three-beat note, would be represented by V.

How might the three-note groups of that system be concealed in a poem?

‘Consecutive letters,’ says Delia.

‘Alternate letters,’ says Tony.

‘First letters of consecutive words,’ says Rosie.

Fine. How would you display the perpetual ictal trinity of the note *d*’?

‘Make vee the twenty-seventh letter of your poem,’ says Delia. ‘Twenty-seven is three times three times three.’

You’re all wonderful. Now listen. I happen to have composed.....

WE HANGED OUR HARPS UPON THE WILLOWS.....

My accountant, Jane Dale, is a frozen-faced feminist who grew up in Oakley, California. Two years ago she married a Romanian-born tobacconist. Jane likes to be addressed by her maiden surname. For some reason she regards me with abhorrence and disbelief. Last week she presented me with a tie. *That was nice of her*, you say. Wrong. My new tie bears the image of a Janus-faced porcine creature, and two explicatory words: A PIG. How may I encrypt Ms Dale’s act in three obscure lines of verse? By using one of the numerical alphabets. In 800 English gematria A PIG adds up to 87, so I’ll write a poem which contains 87 letters. Now I want to hide the word TIE at the centre of the poem, and I need the centre to possess a powerful gravity. TIE adds up to 214, so I’ll multiply 214 by two to get 428, and create a seven-letter centre with a gematric value of 428. On each side of the seven-letter centre will be 40 letters, and DALE adds up to 40. Pretty neat, what? You can see my finished terset on the next page.

....IN THE MIDST THEREOF

An author will give palpable weight to his poem if he roots it in AN AMBIENT CIRCUMSTANCE. I reckon that the Psalmists employed the technique which I have demonstrated, and that every psalm-chapter exhibits a three-part ornithomorphic structure, comprising a tiny central 'body' and two symmetrical 'wings'. (Psalm 137. 2 offers us a clue.) If I'm right, the central body takes form when some real ambient circumstance is translated into a number and then multiplied by two. Psalm 1 may have been written by a Jewish exile who watched the bats at nightfall hovering above the irrigation-channels of a Babylonian farm. In 400 gematria the central four letters of the psalm add up to $478 = 2 \times 239$, and 239 is the gematric value of the inarticulate plural noun עטלפים (ayin-teth-lamedh-pe-yodh-mem = bats). Aside from its four central letters, the psalm contains 244 letters, and 244 is the gematric value of the articulate plural noun העטלפים (he-ayin-teth-lamedh-pe-yodh-mem = the bats). Each 'wing' has 122 letters, and 122 is the gematric value of the word בצל (beth-tzaddi-lamedh = in the [evening] shadows).

'Outrageous! No poet would do such a thing!' shout Prof. Statler and Dr Waldorf.

Thanks a lot. Have you gentlemen written and published poetry of your own? No? Then be quiet. Even a Chinese scribe who copies out the work of a classical poet may record in small characters something about the day on which he does his calligraphy. No more talk! Having merely alluded to a matter that needs a separate book, I'm going to move on. You gentlemen can explore some of the shorter psalms for yourselves. Begin by asking: were the Hebrew psalms without seam, woven from the centre, or were they stitched together like patchwork quilts? Work hard at the Hebrew psalm-texts, and see what you think. I already know what I think. Aunt Dinah's Quilting Party did not create the Psalter.

.....three lines of a neo-Yeatsian terset, entitled 'An insolent harridan from Oakley.' The bold underlined letters which appear in the terset miraculously encode all twenty-two members of an alphabetical notation-system.

'Ahoy,' the biped duke rejoined, 'invest
A dime, fumatic gnu, in Bucharest,
Or else in Oakley!' Crazy Jane quiessed.

As Edgar Allan Poe said in a similar situation, 'Upon the whole, the rhythm is very decent -- to say nothing of its excellent sense.' I'm therefore grieved to admit that the Hebrew Psalter contains no piece of language which might be compared with 'An insolent harridan from Oakley'.

'Don't be grieved,' says Delia. 'Anything like your terset would be quite useless. There's no point in displaying a relationship between letters which indicate notes of the same pitch. You need to show *what the actual pitches are.*' She rises to her feet. 'I mean, unless your biped duke can prove that he relates to the white-note scale of *d*, he hasn't got a leg to stand on. You need to start thinking in Hebrew again.' Miss Benn pauses. 'Here's what you have to ask yourself. How may you cryptically associate two facts: first, that the note *d* is produced by a string whose unitary length is 864, and second, that the three different time-lengths of that note are represented by the letters aleph, cheth, and samekh?'

'It's going to mean numbers again,' you say, as Delia opens a window.

‘Yes,’ says Rosie. ‘It’s probably going to mean combining the gematric values of aleph, cheth, and samekh with the number 864.’ She pauses. ‘Think back to the riddle of Psalm 49, which explicitly stated only the top and bottom notes of the scale – 864 and 432. Focus on those two notes for the moment.’

All right. First, let’s think about bottom *d*. In 400 gematria the letters aleph, cheth, and samekh have values respectively of 1, 8, and 60. When you add those three values to the string-length 864, you get 933.

Secondly, let’s think about three-beat top *d*. In 400 gematria the letter tau has a value of 400. When you add that value to the string-length 432, you get 832.

Now the number 933 is formed by the combination of two disparate quantities – one string-length and different time-lengths – so when we go looking for the number 933 in the gematria of the Biblical text, we should be prepared to find it represented by a group of words rather than simply by one word.

Let’s look for an example of 933 in 400 gematria. The number 933, if we find it, will stand for a notation-system in which the letters aleph, cheth, and samekh indicate respectively one-beat *d*, two-beat *d*, and three-beat *d*. Apart from the notation-system, the number 933 will also represent three ‘deep’ or ‘bottom’ notes of different time-lengths.

To speak of ‘deep’ notes in the context of ancient Israelite music is not to commit an act of conceptual violence. Much of the musical theory of ancient Greece was based on a lyre having strings of approximately equal lengths, and on a descending scale, but the corresponding Israelite instrument was most likely strung in accordance with the numbers of Psalm 49’s riddle, whose order – 864 before 432 – indicates an ascending scale. Length and depth are kindred dimensions, so it may not be anachronous to say that in ancient Israel the longest string gave the ‘deepest’ note.

Suppose that the Psalter does contain such a gematric example of the musical number 933 as we hope to find. If the letters aleph, cheth, and samekh are not involved in the gematria, then we’ll need some clear sign that the number 933 relates to three deep or bottom notes. A 933 on its own will tell us no more than a 432 on its own, and there are plenty of 432s.

Well, then! How many 933s are there in the Psalter? Or first of all, how many single-word 933s are there? Only one. It comes in the strange and powerful eighth verse of Psalm 42 (AV, verse 7).

תהום-אל-תהום קורא לקול צנורִיךְ

(= DEEP calleth UNTO DEEP at the noise of thy waterspouts:

כל-משבריך וגליך עלי עברו

all thy waves and thy billows are gone over me).

The English words DEEP.....UNTO DEEP translate the three-part hyphenated Hebrew word tau-he-wau-mem---aleph-lamedh---tau-he-wau-mem, with which the verse begins.

In 400 gematria that three-part word transcribes as

$$[400 + 5 + 6 + 40] + [1 + 30] + [400 + 5 + 6 + 40] = 933$$

I'm inclined to believe that the word's three parts represent the three different time-lengths of the note *d*.

'Do you take the word *deep* as having the secondary meaning of deep or bottom note?' asks Rosie.

Yes. And I reckon that the word *calleth* should be construed in a musical sense. Imagine someone learning to play three different 'deep' or 'bottom' notes -- one-beat *d*, two-beat-*d*, and three-beat *d* -- on a string which is 864 units long. Then look at the three-part Hebrew word tau-he-wau-mem---aleph-lamedh---tau-he-wau-mem. Can you think of a more economical way of representing the three different notes?

'No, I can't,' replies Miss Benn. 'It's perfect. *Deep calleth unto deep* means, in musical terms, *d calleth unto d*.' She writes a one-line equation on a loose page.

$$864 + [\text{aleph} = 1] + [\text{cheth} = 8] + [\text{samekh} = 60] = 933$$

'There is an *amazing* amount in those eight words from verse 8 of Psalm 42.' Delia points to a page of her notebook. 'Far more than the top and bottom notes of the scale.'

$$451-31-451 \quad 307 \quad 166 \quad 376 \quad 50-572 \quad 69 \quad 110 \quad 278$$

'Let's forget about the hyphens,' she continues, 'and talk about the gematric values of *eleven* Hebrew words.'

$$451 \quad 31 \quad 451 \quad 307 \quad 166 \quad 376 \quad 50 \quad 572 \quad 69 \quad 110 \quad 278$$

'But first of all,' says Miss Benn, 'let's remind ourselves of how the gematric values of the Hebrew alphabet's twenty-two letters are linked with the eight notes of the scale.' She pauses.

'One-beat *d*, two-beat *d*, and three-beat *d* are represented respectively by aleph = 1, cheth = 8, and samekh = 60. All three notes are sounded by a string which is 864 units long.

$$864 + 1 + 8 + 60 = 933$$

'One-beat *e*, two-beat *e*, and three-beat *e* are represented respectively by beth = 2, teth = 9, and ayin = 70. All three notes are sounded by a string which is 768 units long.

$$768 + 2 + 9 + 70 = 849$$

'One-beat *f*, two-beat *f*, and three-beat *f* are represented respectively by gimel = 3, yodh = 10, and pe = 80. All three notes are sounded by a string which is 729 units long.

$$729 + 3 + 10 + 80 = 822$$

'One-beat *g*, two-beat *g*, and three-beat *g* are represented respectively by dalet = 4, kaph = 20, and tzaddi = 90. All three notes are sounded by a string which is 648 units long.

$$648 + 4 + 20 + 90 = 762$$

‘One-beat *a*, two-beat *a*, and three-beat *a* are represented respectively by he = 5, lamedh = 30, and qoph = 100. All three notes are sounded by a string which is 576 units long.

$$576 + 5 + 30 + 100 = 711$$

‘One-beat *b*, two-beat *b*, and three-beat *b* are represented respectively by wau = 6, mem = 40, and resh = 200. All three notes are sounded by a string which is 512 units long.

$$512 + 6 + 40 + 200 = 758$$

‘One-beat *c*’, two-beat *c*’, and three-beat *c*’ are represented respectively by zayin = 7, nun = 50, and s[h]in = 300. All three notes are sounded by a string which is 486 units long.

$$486 + 7 + 50 + 300 = 843$$

‘The perpetually three-beat *d*’ is represented by tau = 400, and it is sounded by a string which is 432 units long.

$$432 + 400 = 832$$

‘We’re halfway there!’ cries Delia.

Good show. What comes next?

‘Another set of formulae,’ Miss Benn replies. ‘Look at the eight string-length-plus-notation-number totals.

$$d: 933 \quad e: 849 \quad f: 822 \quad g: 762 \quad a: 711 \quad b: 758 \quad c': 843 \quad d': 832$$

‘Then go back to the eleven gematric values of Psalm 42’s eighth verse.’ Miss Benn pauses.

$$451 \quad 31 \quad 451 \quad 307 \quad 166 \quad 376 \quad 50 \quad 572 \quad 69 \quad 110 \quad 278$$

‘We’ve already seen how the first three consecutive words of the verse give us 933, or the *d*-number.

$$451 + 31 + 451 = 933$$

‘The next three consecutive words give us 849, or the *e*-number.

$$307 + 166 + 376 = 849$$

‘Words three and four give us 758, or the *b*-number.

$$451 + 307 = 758$$

‘Words five, six, seven, and eight give us the *d*’-number.

$$- 166 + 376 + 50 + 572 = 832$$

‘Four out of the eight string-length-plus-notation numbers have formulae which employ *only consecutive words*.’

And there you have clear evidence of *deliberate cryptography*.

‘Correct!’ Delia sets a page on the table. ‘Of course the eleven gematric values of Psalm 42 will give us formulae for all *eight* numbers.’ She pauses. ‘There are thirty digits in the eleven gematric values of the psalm-verse, and thirty terms in the eight formulae. I’ve set out the terms in the order of their appearance.’

| | | | | | | | | | | |
|------------------|-------------------|-------------------------------------|--------------------------|------------------------|-------------|------------------------|--------------------------|-----------|------------|-------------|
| 451 | 31 | 451 | 307 | 166 | 376 | 50 | 572 | 69 | 110 | 278 |
| $451 + 31 + 451$ | | | | | | | | | | |
| | $307 + 166 + 376$ | | | | | | | | | |
| | | $451 + 451 - 166 - 376 + 572 - 110$ | | | | | | | | |
| | | | $- 31 + 307 + 376 + 110$ | | | | | | | |
| | | | | $451 - 166 + 376 + 50$ | | | | | | |
| | | | | | $451 + 307$ | | | | | |
| | | | | | | $307 + 376 + 50 + 110$ | | | | |
| | | | | | | | $- 166 + 376 + 50 + 572$ | | | |
| | | | | | | | | $=$ | 933 | (d) |
| | | | | | | | | $=$ | 849 | (e) |
| | | | | | | | | $=$ | 822 | (f) |
| | | | | | | | | $=$ | 762 | (g) |
| | | | | | | | | $=$ | 711 | (a) |
| | | | | | | | | $=$ | 758 | (b) |
| | | | | | | | | $=$ | 843 | (c') |
| | | | | | | | | $=$ | 832 | (d') |

Well done, Delia, that was lucidly presented!

We can apply your formulaic template to a number of other musical cryptograms from the Old Testament.

Let me print out the Hebrew text of I Chronicles 15. 16, omitting three hyphens.

וַיֹּאמֶר דָּוִד לְשָׂרֵי הַלְוִיִּם לְהַעֲמִיד אֶת אַחֵיהֶם

(= And David spake to the chief of the Levites to appoint their brethren to be

הַמְשַׁרְרִים בְּכָלֵי שִׁיר וּבַלַּיִם וּכְנָרוֹת וּמְצַלְתִּים

the singers with instruments of musick, psalteries and harps and cymbals,

מִשְׁמִיעִים לְהַרִּים בְּקוֹל לְשִׂמְחָה

sounding, by lifting up the voice with joy).

The verse contains two signs of cryptography.

One sign is an unusual four-letter spelling of David's name, which adds up to TWENTY-FOUR, the total number of digits contained in the eight notation-numbers.

דָּוִד (daleth-wau-YODH-daleth) adds up to 24 in both 400 and 22 gematria.

The other sign is a piece of apparently redundant language at the end of the verse (*sounding, by lifting up the voice with joy*).

It turns out that three consecutive words, printed in large type above, give us 933, or the *d*-number: mem-shin-mem-yodh-ayin-yodh-mem lamedh-he-resh-yodh-mem beth-qoph-wau-lamedh.

I Chronicles 15. 16 contains seventeen Hebrew words. From the 400 gematric values of these words we can derive formulae for all eight notation-numbers.

The formulae employ twenty-six terms. Twenty-six is the 22-gematric value of the authorial formula lamedh-daleth-wau-lamedh (= 'of David', or 'by David').

| | | | | | | | | | | |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|----|--|------|
| 257 | 24 | 540 | 91 | 159 | 401 | 64 | 795 | 62 | | |
| 510 | 132 | 682 | 616 | 510 | 285 | 138 | 383 | | | |
| 510 + 285 + 138 | | | | | = | 933 | | | | (d) |
| 616 + 257 - 24 | | | | | = | 849 | | | | (e) |
| 159 + 795 - 132 | | | | | = | 822 | | | | (f) |
| 795 + 383 - 257 - 159 | | | | | = | 762 | | | | (g) |
| 91 + 682 - 62 | | | | | = | 711 | | | | (a) |
| 682 + 616 - 540 | | | | | = | 758 | | | | (b) |
| 401 + 64 + 510 - 132 | | | | | = | 843 | | | | (c') |
| 540 + 383 - 91 | | | | | = | 832 | | | | (d') |

Sounding, by lifting up the voice means ‘singing and playing from Davidic notation’. The arithmetic speaks for itself. Of course on the day the Levitical musicians might have played their whole programme from memory, like Russian and Ukrainian folk orchestras, but they would have learned the music from notation in the first place.

Likewise, the children of Judah would have learned ‘The Song of the Bow’ from its own contained notation. And hereby hangs a tale. In II Samuel 1. 18, the narrator records that David’s lament ‘is written in the book of Jasher’.

ויאמר ללמד בני יהודה קשת

(= Also he bade them teach the children of Judah the use of the bow:

הנה כתובה על ספר הישר

behold, it is written in the book of Jasher.)

It is plain that the author of II Samuel 1. 18 believes himself to be dealing with a matter of unusual importance.. First, he makes a point of telling us that David’s lament is written in the book of Jasher (along with the prodigious tale of how *the sun stood still, and the moon stayed* – see Joshua 10. 13). Secondly, he makes the thirty-seven letters of his verse add up to 2701, which is the total gematric value of Genesis 1. 1.

What is he telling us? That the enormous rôle of David in musical history is almost that of a creator.

Look at the Hebrew text of II Samuel 1. 18. Four consecutive words, printed in large type above, have 400-gematric values which add up to 933, the d-number: he-nun-he kaph-tau-wau-beth-he ayin-lamedh samekh-pe-resh.

The formulae for all eight notation-numbers can be expressed in thirty terms. David commanded the children of *Judah* to be taught his lament.

Thirty is the value of *Judah* (yodh-he-wau-daleth-he) in both 400 and 22 Hebrew gematria.

| | | | | | | | | | | | | |
|---------------------------------|-----|----|----|-----|----|-----|-----|-----|-----|---|-----|------|
| 257 | 104 | 62 | 30 | 800 | 60 | 433 | 100 | 340 | 515 | | | |
| 60 + 433 + 100 + 340 | | | | | | | | | | = | 933 | (d) |
| 60 + 100 + 340 + 515 – 104 – 62 | | | | | | | | | | = | 849 | (e) |
| 800 + 515 – 60 – 433 | | | | | | | | | | = | 822 | (f) |
| 62 + 800 – 100 | | | | | | | | | | = | 762 | (g) |
| 433 + 340 – 62 | | | | | | | | | | = | 711 | (a) |
| 62 + 800 – 104 | | | | | | | | | | = | 758 | (b) |
| 433 + 100 + 340 – 30 | | | | | | | | | | = | 843 | (c') |
| 257 + 60 + 515 | | | | | | | | | | = | 832 | (d') |

Once again, the arithmetic speaks for itself. We realize that there is more to the text of II Samuel 1. 18 than a scholarly allusion to the book of Jasher! The Bible contains no trivial references, no unnecessary details, and no redundant words. So whenever we come upon a piece of Biblical language that appears to be superfluous or even verbose, we should try to establish its purpose. Especially if it has been written by David. Look once again at the first two verses of Psalm 18 (AV, title plus verse 1).

לִמְנַצַּח לַעֲבַד יְהוָה לְדוֹד אֲשֶׁר דָּבַר לַיהוָה
את-דברי השירה הזאת ביום הציל-יהוה
אותו מכף כל-איביו ומיד שאול
ויאמר ארחמך יהוה חזקי

To the chief Musician, A Psalm of David, the servant of the LORD, who spake unto the LORD the words of this song in the day that the LORD delivered him from the hand of all his enemies, and from the hand of Saul: And he said, I will love thee, O LORD, my strength.

The Hebrew word which is rendered *And he said* is not remarkable in itself, but it has a remarkable function: it constitutes a bridge between the titular verse and the first sung verse. Within the Psalter the usage is unique to Psalm 18. And the word that David uses for *song* is also unparalleled, for while the masculine word shin-yodh-resh appears many times in the psalm-titles, Psalm 18's feminine word shin-yodh-resh-he appears nowhere else in the Psalter. That isn't all. The two Hebrew words which are rendered *this song*, printed in large letters above, are preceded by the first thirty-four characters and followed by the last thirty-four characters of verse 1. David appears to have given these two words a place of centrality. (Thirty-four is the 400 gematric value of the word kaph-daleth-wau-daleth = *according to David, or in the manner of David*).

Well, then! Two Hebrew words, meaning *this song*, stand exactly in the middle of Psalm 18. 1, and the noun is a form unique to the Psalter. Are these two words significant? What I mean is, do they have musically significant gematric values?

Here they are spelled out. The first letter of each word is an untranslated definite article.

השירה הזאת

he-shin-yodh-resh-he he-zayin-aleph-tau

$$[5 + 300 + 10 + 200 + 5] + [5 + 7 + 1 + 400] = 933$$

For the third time we have found a reference to the Davidic notation-system, represented by the *d*-number 933, in an explicitly musical context. David's musical number 933 embraces the one-beat note, the two-beat note, and the three-beat note which are sounded by a string having a notional length of 864 units.

$$864 + [\text{aleph} = 1] + [\text{cheth} = 8] + [\text{samekh} = 60] = 933$$

Now let's go back to verse 3 of Psalm 18. You recall the spelling of the hyphenated Hebrew word which is rendered *I will trust in him*.

אחס-ה-בו

The first three letters of the word are ALEPH, CHETH, and SAMEKH.

These Hebrew letters correspond to the English letters A, H, and O in *Ahoy*, the first word of my neo-Yeatsian terset.

'Ahoy,' the biped duke rejoined, 'invest
A dime, fumatic gnu, in Bucharest,
Or else in Oakley!' Crazy Jane quiesced.

Consider once again the first five sung words of the psalm:

ארחמך יהוה חזקי יהוה סלעי

(= *I will love thee, O LORD, my strength. The LORD is my rock.....*).

- | | | |
|----|------------------|---------------------------|
| 1. | I will love thee | ALEPH-resh-cheth-mem-kaph |
| 2. | O LORD | yodh-he-wau-he |
| 3. | my strength | CHETH-zayin-qoph-yodh |
| 4. | The LORD is | yodh-he-wau-he |
| 5. | my rock | SAMEKH-lamedh-ayin-yodh |

The first, third, and fifth sung words of Psalm 18, which envelop the LORD's name יהוה, begin respectively with ALEPH, CHETH, and SAMEKH, and correspond respectively to the first, third, and fifth words of my terset's title (An insolent harridan from Oakley). The three Hebrew letters ALEPH, CHETH, and SAMEKH are

recapitulated in the tenth sung word (= I will trust in him), which begins ALEPH-CHETH-SAMEKH. It is as if David has written the three Hebrew letters of his first notation-number in red. By the way, in chapter 16 we'll see how the seventy-seven Hebrew letters of Psalm 18. 1 can generate a set of mnemonic dominoes.

MR HOLMES, IT WAS THE HEAD OF A GIGANTIC HOUND

In the course of my travels I have met Crazy Janes of every imaginable species, but last Saturday was something else. Having been driven from the house by a noisy vacuum cleaner, I walked down to the river Lagan, installed myself on a park bench, and began to work at an Akkadian text. It was five o'clock.

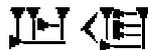
After ten minutes a high-timbred voice said *since we left Ballymena*, and two ladies appeared on the towpath. One of them was pushing an ancient cobalt-blue pram. The ladies regarded me with frank abhorrence. ('Reading a book,' said the owner of the voice. 'Aye, you'd worry about a boy like that,' said her companion.)

The pram was occupied by a large Alsatian dog, bonneted like Pinkie, and grave as Anubis. A waterhen watched warily as the little procession passed. Solemn trees looked down in silence. Then a man materialized. It was the third Elsie! He glanced at my text. 'What does THAT say?' he asked, pointing to one character.



'*Damu*,' I replied. 'Blood.'

'And what does THAT say?' the man asked, pointing to another character.



'*Kalab*,' I replied. 'Dog.'

'You can follow the scribe's train of thought,' said the third Elsie. '*Bloodhound*.'

As our minds begin to generate thoughts of dinner, Delia puts the shell-trumpet to her lips, and plays a single-pitch army bugle-call of thirteen notes.

Come to the cookhouse door, boys, come to the cookhouse door!

At once I find myself thinking about the music which was supplied by one hundred and twenty priestly trumpeters at the consecration of Solomon's temple. Verses 13 and 14 of II Chronicles 5 read as follows in the AV:

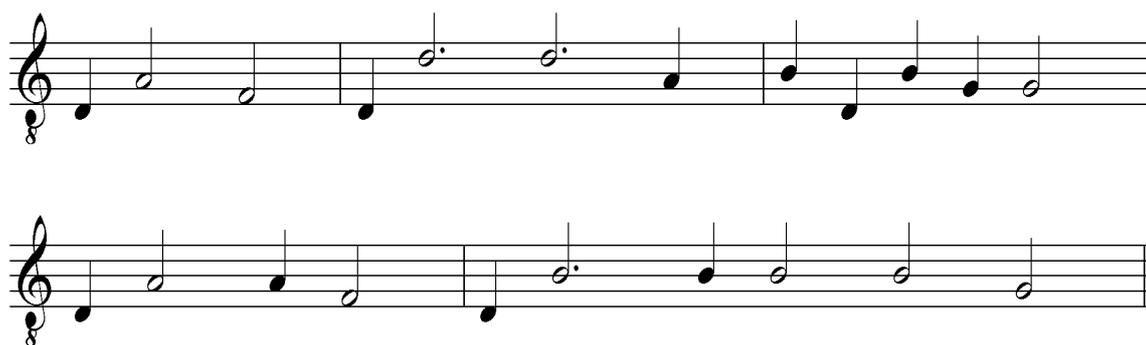
It came even to pass, as the trumpeters and singers were as one, to make one sound to be heard in praising and thanking the LORD; and when they lifted up their voice with the trumpets and cymbals and instruments of musick, and praised the LORD, saying, For he is good; for his mercy endureth for ever: that then the house was filled with a cloud, even the house of the LORD; So that the priests could not stand to minister by reason of the cloud: for the glory of the LORD had filled the house of God.

What composition was being performed? The Hebrew words rendered *For he is good; for his mercy endureth for ever* appear in Psalms 106, 107, 118, and 136, but only Psalm 118 contains these Hebrew words in both its first verse and its last verse. Psalm 118's penultimate verse (= *Thou art my God, and I will praise thee: thou art my God, I will exalt thee*) reads as follows in Hebrew:

אֱלֹהֵי אַתָּה וְאַוֹדָךְ אֱלֹהֵי אֲרוֹמָמְךָ

Note that the second character of the second word stands for a double letter.

The verse transcribes musically thus:



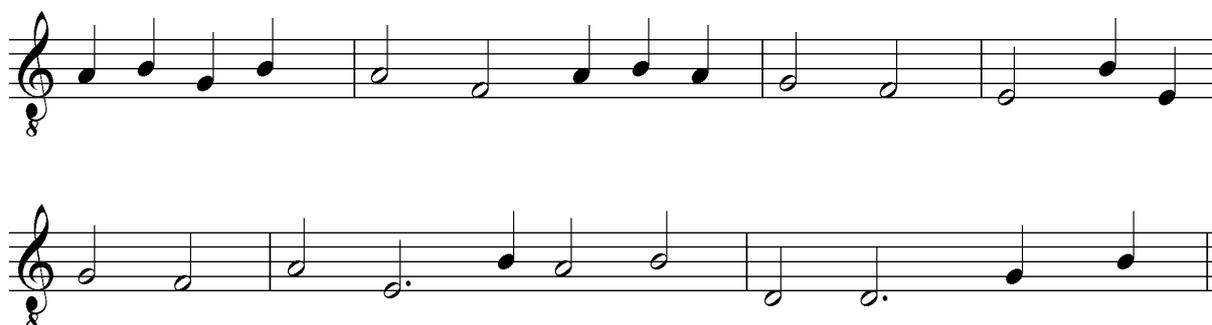
It sounds lively. Half of the notes are one-beat notes. Furthermore, the alternating passages of D minor and G major chord-notes are quite remarkable.

The absence of the notes *e* and *c'* means that the whole melody can be sung and played euphonically over a continuous *d'* on one-note trumpets.

Psalm 118's final verse (= *O give thanks unto the LORD; for he is good: for his mercy endureth for ever*) reads as follows in Hebrew:

הוֹדוּ לַיהוָה כִּי-טוֹב כִּי לַעוֹלָם חַסְדּוֹ

The verse transcribes musically thus:



Once again, it sounds lively. Twelve out of twenty-five notes are one-beat notes. The final Hebrew word turns out to consist musically of G major chord-notes. That word (cheth-samekh-daleth-wau) means 'his mercy', and for no reason it reminds me of a Hebrew passage which *begins* with the word for 'mercy': verses 11 and 12 of Psalm 85 (AV, verses 10 and 11).

חַסֵּד-וָאֱמֶת נִפְגְּשׁוּ צְדָקָה וְשָׁלוֹם נִשְׁקָו

(= Mercy and truth are met together; righteousness and peace have kissed each other.)

The second character of the penultimate word stands for a double letter.

אֱמֶת מֵאֶרֶץ תִּצְמַח וְצְדָקָה מִשָּׁמַיִם נִשְׁקָף

(= Truth shall spring out of the earth; and righteousness shall look down from heaven.)

These two verses transcribe to give the following melody.



The sheer amount of arpeggiation here is striking, with first seven and later fifteen consecutive notes of the G major arpeggio (notes 1 to 7, and 24 to 38 respectively). You can see a kind of word-painting in the last six 'bars'. *Truth shall spring out of the earth; and righteousness shall look down from heaven.* For a moment I find myself wondering about contrary-motion harmony. Then the words *truth* and *righteousness* remind me of Psalm 45. 5 (verse 4 in the AV).

והדרך צלח רכב

(= And in thy mercy ride prosperously

על-דבר-אמת וענוה-צדק

because of truth and meekness and righteousness;

ותורך נוראות ימינך

and thy right hand shall teach thee terrible things.)

When verse 5's twenty-fifth character is allowed to stand for a double letter, as it does in your Holzhausen text of the Hebrew Bible, its eleven words transcribe as follows.



Its tunefulness confronts us with a problem. Psalm 45's title begins *To the chief Musician upon Shoshannim*, so if verse 5 is the tune of the psalm, then 'Shoshannim' is not. What does the word rendered 'upon' mean here? Is verse 5's melody played and sung UPON 'Shoshannim', in the manner of Purcell's *Three parts upon a Ground*?

'I have a book at home,' says Rosie. 'It mentions the words *Shushan* and *Shoshannim* which appear in the psalm-headings.' She yawns helplessly. 'According to the author, those words indicate *a melody sung in parallel sixths*.'

So they do! But we'll consider the matter of sixth-based harmony in chapter 17. For the moment, let's think in terms of *fifth*-based harmony. Here is the melody of David's lament for Abner. Delia will stand by the window, and sing the melody to *la*, up an octave.



Rosie will stand at the far side of the room, and sing at the same time to *la*, up an octave, the harmony part which appears below.



The two girls will perform their duet, for that is what it is, at a speed of half a second per single beat, so the first note of each part will last for one and a half seconds. Listen! The part that Rosie is singing harmonizes with each note of David's melody at either the fifth above or the fifth below. We're hearing a species of harmony which survived down to modern times in the Icelandic *tvísöngur*. And that kind of harmony goes back to ancient Israel, as we'll see when we come to chapter 16.

(Hark, the doorbell! Jane Dasecy has come over to borrow a bowed psaltery, and she bears news. Her stepfather received a phone-call yesterday afternoon which left him quivering with fear. His gold-mine shares have plunged on the market.)

Here is some counsel for any readers who want to turn page 335's panels of notation into a living duet. Ask your two performers to stand at least twelve feet apart. Write an English text based on the AV which fits the notes. If you want to give the duet an instrumental performance, try to use two instruments which have noticeably different tone-colours, like viola and trombone. Whatever you do, don't try to play the two parts on a keyboard instrument of any kind. The duet is not an abstraction. It needs plenty of space, it requires different colours, and it comes to life only when it leaves the page.

Alphabetical characters begin life (not as dead letters, but as *living* letters) by representing spoken sounds. Once alphabetical characters acquire a running order, they acquire the ability to represent numbers. Once musical notes acquire a running order of their own (based on their position in a scale), and once they come to be assigned different time-lengths, it is natural for musicians to employ *letters of the alphabet* as the representatives of those notes.

SPOKEN SOUND BRINGS LIFE TO SCRIBAL SYMBOL

One stormy day, when a beautiful Russian flautist was saying goodbye to a British viol-player in Tashkent airport, she was led to mention Dostoevski's Natasha from *Униженные и оскорбленные* (= Humiliated and insulted). Sound allows parallel universes to impinge upon one other. The reference to *Dostoevski's Natasha* caused a passing Indian professor to recall a line of the Urdu poet Khwaja Mir Dard that begins *Dosto dekha tamasha*:

दोस्तो देखा तमाशा याँका बस ।

(= O friend, I've had enough of here-and-now phenomena).

Then the Indian professor remembered how Khwaja Mir Dard goes on to say in Urdu, *You can stay here if you like, but I'm going home*. A moment later the British viol-player rose reluctantly to his feet, and recited one sentence from *Humiliated and insulted*: Решительно надо было идти домой. The sentence means, *It was clear that I had to go home*.

Not far away, a clear-voiced American lady amused her eight companions by reading from a book five words of Walter De La Mare's poem 'The Storm': *there were nine of us*. On hearing her last three syllables, two men from Dushanbe recalled a famous Tajik poem by Farzāna Khojandī, entitled 'Найнавоз' (*Nainavoz* = The flute-player).

Enough! Before we stop, let me liquidate an oft-repeated piece of nonsense. When certain scholars fantasize that song developed naturally from speech, and proclaim their fantasy as if it was a fact, they should be ignored. Song is one thing, and speech is another. Song does not develop naturally from speech any more than an omelette develops naturally from an egg.

In general, the order of creation is that a simple being does not develop into a complex being. Those who know enough about real life are rarely captivated by foolish theories. I mean to say, the classical evolution-myth falls on its face, like Dagon, when it is confronted with the fundamental fact of linguistics. Languages start off as complex, and become more simple with the passage of time. No biologist is able to account for that evolutionary truth. Or to answer the following question:

If *survival of the fittest* is a fact, why does everyone use 12 point Times New Roman unbold?

ENTR'ACTE: HOW TO WRITE A GEMATRICALLY CENTRED POEM

For most of today, which happens to be the thirteenth day of the month, I've been thinking about three numbers: 385, 87, and 37. Aside from being the pyramidal number of ten, 385 is the 400 Hebrew gematric value of the word מצרימה (= to Egypt) and of the word פוטיפר (= Potiphar). Both words appear in Genesis 39. 1.

ויוסף הורד מצרימה ויקנהו פוטיפר

(= And Joseph was brought down to Egypt, and Potiphar bought him.....).

It intrigues me to observe that the same pyramidal number appears twice in a verse which relates to *Egypt*. (The pyramidal series runs 1, 5, 14, 30, 55, 91, 140, 204, 285, 385, and so on.) Anyway, 385 is also what mathematicians call the 20-gonal number of seven, while 87 is what they call the 30-gonal number of three. For its part 37 is the centred hexagonal number of four. If I regard the numbers 385, 87, and 37 as constituting the 'ambient circumstance' of a particular day, may I enshrine the said circumstance in a piece of vespertilian verse, using the 800 English alphabet? Yes, with ease! I'll build a thirteen-letter gematric centre of 770, representing 2 x 385. On each side of the central 'body' I'll place a 'wing' of 37 letters. The whole poem will therefore contain a total of 87 letters.

How shall I create the centre? In an almost random manner. From a given book I'll extract thirteen individual letters which add up to 770. Lettuce Girl is passing me a novel by the Finnish author Rosetta Kivi, entitled *Ruususatu*. Here goes.

T E A E F O E S R O L T H

After a moment the chosen letters arrange themselves as four words: TO FEAR HE STOLE. Six minutes later a glorious piece of verse is born.

Pompey was a clever boy
Whom pirates learned to fear:
He stole a horse in Illinois,
And rode with Paul Revere.

Count the letters in the central 'body', and in each 'wing'.

Pompeywasacleverboywhompirateslearned tofearehestole ahorseinillinoisandrodewithPaulRevere

Now look at the 350-letter cento which Delia declaimed on page 293. Its 6-letter central 'body' has a value of [2 x 256], and each 'wing' contains 172 letters!

SHEHATHNOTSEENTHECHANGEOFFOURTEENYEARSTHATB
REATHESUPONABANKOFVIOLETSTOOURPAVILIONSHALL
ILEADYOUFIRSTHERODOFJEWRYDARENOTLOOKUPONYOU
NORREADTHESECRETSINTALLTHISWESWEARASMAIDSO

THIRTE

ENDOFPUPPYDOGSILLPROVEABUSYACTORINTHEIRPLA
YINSPITEOFFOPEORDIGNITIESOFCHURCHOBRAVENEWW
ORLDISENTYOUNEYSIRANDNOWLOUDHOWLINGWOLVES
AROUSETHEJADESWEMUSTTOHORSEAGAINGOGOPROVIDE

Miss Benn claims that the cento is based on three words: ITSELF, AROSE, and RAMBLED (see page 293). Of course she is joking, but the layout of her letters shows us how an ancient Israelite might have created the framework of a psalm.

One day I read in a French mathematical textbook a sentence containing the words*la probabilité qu'elle soit mauve est*..... For no reason I decided to encrypt the words *soit*,

CHAPTER 16: SINGERS WITH INSTRUMENTS OF MUSICK

When I come again in peace, I will break down this tower.

Judges 8. 9

Le monde n'a jamais manqué de Charlatans

(= The world has never lacked charlatans).

La Fontaine

Some puritanical persons who believe themselves to be evangelical Christians are characterized chiefly by hatred. One such person is at present going through my book like a growling monitor lizard, seeking that of which he may disapprove. He doesn't want to learn anything. He wants to make trouble. Now Seth Prodie, for that is his name, regards cryptography as a work of darkness. He refuses to accept that the psalm-texts contain their own notation. When you point out that every psalm is 50% text and 50% music, he disagrees angrily.

'It goes without saying,' says Prodie, 'that every word of the Psalter is a purely religious entity which must be interpreted in a purely religious manner.'

How UNSPEAKABLY BORING, you think. After a moment two verses of Psalm 104 come into your mind.

The trees of the LORD are full of sap; the cedars of Lebanon, which he hath planted; Where the birds make their nests: as for the stork, the fir trees (ברושים) are her house.

The stork has no voice, but she lives in the very trees that are used to make musical instruments. You remember II Samuel 6. 5.

And David and all the house of Israel played before the LORD on all manner of instruments made of fir (ברושים) wood, even on harps, and on psalteries, and on timbrels, and on cornets, and on cymbals.

Singular 'fir' in Hebrew is *beròsh*. That word brings into your mind a line and a bit of the Czech poet Karel Hynek Mácha:

*tam bříza k boru, k bříze bor
se kloní*

(= There birch leans against pine, and pine against birch).

Mácha's apparently simple acts of inflection produce sublime verbal music. For their part, the different spellings lamedh-wau-lamedh-yodh and lamedh-wau-lamedh-ALEPH in Psalm 124. 1-2 produce variant pieces of actual melody.

לוֹלִי יְהוָה שְׁהִיָּה לָנוּ יֵאמֶר-נָא יִשְׂרָאֵל

לוֹלֵא יְהוָה שְׁהִיָּה לָנוּ בְּקוֹם עֲלֵינוּ אָדָם



First two words of verse 1 transcribed



First two words of verse 2 transcribed

If the variant ALEPH has no melodic function, will Seth Prodie, who knows nothing about the Hebrew language, presume to explain its linguistic purpose?

Listen to the expert. ‘Whatever it means,’ says Prodie, ‘the variant aleph cannot be musical. No single letter could ever carry that amount of significance.’

Wrong! Sometimes ‘a single Alif’ tells a notable tale. Years ago the United Kingdom and France worked together to build a supersonic aeroplane. It was agreed to name the aeroplane *Concorde*. Or rather, it wasn’t agreed at all: the British wanted to call it *Concord*, but the French held out for their own form of that word, and the E on the end of *Concorde* lets you know who won.

You take solace from the fact that *concorde* is really an English word. As recently as 1509, Stephen Hawes wrote in *The Pastime of Pleasure* 16. 14:

*The vii. Sciences in one monacorde,
Eche upon other do full well depende,
Musycke hath them so set in concorde.*

The instrument which Hawes mentions makes you think of a rather less agreeable poem – Dante Gabriel Rosetti’s ‘The Monochord’, in which the words *notes* and *wave* are used technically.

*Nay, is it Life or Death, thus thunder crown’d,
That ’mid the tide of all emergency
Now notes my separate wave?*

Rosetti’s words remind you that each *note* of a melody really is a *separate wave*. And a monophonic melody is a series of ‘separate waves’, but you have no reason to believe that the psalms were performed monophonically. Psalm 85. 11 (AV) has made you wonder about a form of harmony based on contrary motion.

*Truth shall spring out of the earth; and righteousness shall look down
from heaven.*

Already you’ve wondered whether the melody of Psalm 45 is to be played and sung UPON ‘Shoshannim’, in the manner of Purcell’s *Three parts UPON a ground*. Did David’s music ever involve different parts ‘set in concorde’?

You recall a strange passage from I Chronicles 15. Verses 19 to 21 read in the AV as follows.

*So the singers, Heman, Asaph, and Ethan, were appointed to sound
with cymbals of brass; And Zechariah, and Aziel, and Shemiramoth,
and Jehiel, and Unni, and Eliab, and Maaseiah, and Benaiah, with
psalteries ON ALAMOTH; And Mattithiah, and Elipheleh, and Mikneiah,
and Obed-edom, and Jeiel, and Azaziah, with harps ON THE SHEMINITH
to excel.*

What are ‘psalteries on Alamoth’, and what are ‘harps on the Sheminith’? The Hebrew word Alamoth means ‘girls’, ‘maidens’, or ‘virgins’, and it has been taken by some to indicate psalteries of female-voice pitch. The Hebrew word Sheminith means ‘eighth’, and it has been taken by some to indicate harps

pitched an octave below Alamothe. Thus the Good News Bible speaks respectively in verses 20 and 21 of 'high-pitched harps' and 'low-pitched harps'. But Psalm 46 is headed *To the chief Musician for the sons of Korah, A Song upon Alamothe*. If Alamothe was a matter of female pitch, you would expect a mention not of Korah's sons, but of Korah's daughters.

Now you're pretty sure that Psalm 46 is FOR the sons of Korah, not authorial BY or OF. (You remember the heading of Psalm 88: *A Song or Psalm for the sons of Korah.....Maschil of Heman the Ezrahite*.) What then? Is Alamothe a melody? No. Whatever Alamothe is, it is something that is executed simultaneously with Sheminith. Verse 28 of I Chronicles 15 speaks of the Levites 'making a noise with psalteries and harps'. Verse 3 of Psalm 150 says, 'praise him with the psaltery and harp'. What is Sheminith? David's Psalm 6 is headed *To the chief Musician on Neginoth upon Sheminith*, and Neginoth means 'string instruments', but David's Psalm 12 is headed merely *To the chief Musician upon Sheminith*.

In other words, Alamothe and Sheminith can have an instrumental significance (I Chronicles 15. 20-21, heading of Psalm 6), but they can have a purely vocal significance as well (headings of Psalm 12 and 46). Alamothe can't mean 'at female-voice pitch', since the appointed performers of Psalm 46 are male, and so Sheminith can't mean 'an octave below Alamothe'. So much for the notion of mere octave doubling, or parallel organum of the octave. But might Sheminith have been a euphonal reversal of the melodic scale, with first and last notes separated by an eighth, or octave, from the corresponding notes of the melodic version? Did the melodic and Sheminith lines form what Menuhin, speaking in the context of melodic repetition, calls 'a double image rather like the right and left halves of a leaf when folded upon each other' [Yehudi Menuhin and Curtis W David, *The Music of Man* (London, 1980), 31]? Was Sheminith a contrary motion harmonizing scale?

There are several hints in Scripture of the musical principle *Ma fin est mon commencement*. Isaiah 44. 6: *I am the first, and I am the last*. Isaiah 48. 12: *I am the first, I also am the last*. The principle appears four times in Revelation (1. 8, 1. 11, 21. 6, 22. 13) with the precise sense of alphabetical simultaneity: *I am Alpha and Omega* (= the first and the last letters of the Greek alphabet).

There is even a cryptographic contrary-motion Hebrew alphabet, the so-called Athbash, in which aleph is represented by tau, beth is represented by s[h]in, and so on.

THE ATHBASH ALPHABET

aleph = tau, beth = s[h]in, gimel = resh, dalet = qoph, he = tzaddi

wau = pe, zayin = ayin, cheth = samekh, teth = nun, yodh = mem

kaph = lamedh, lamedh = kaph, mem = yodh, nun = teth

samekh = cheth, ayin = zayin, pe = wau, tzaddi = he

qoph = dalet, resh = gimel, s[h]in = beth, tau = aleph

Jeremiah uses the contrary-motion alphabet at three points in his prophecy: 25. 26, 51. 1, and 51. 41.

In 25. 26 he encodes the word BABEL, which means Babylon, as SHESHACH. (Beth-beth-lamedh in Athbash becomes shin-shin-kaph.)

Later Jeremiah encodes the same word in the first part of 51. 41, only to decode it in the final part.

איך נלכדה ששך ותתפש תהלת כל הארץ איך היתה לשמה בבל בגוים

(= How is SHESHACH [shin-shin-kaph] taken! and how is the praise of the whole earth surprised! how is BABYLON [beth-beth-lamedh] become an astonishment among the nations!)

Why has Jeremiah spelled the verse's most important word, as Purcell would say, both *recte et retro*?

In 51. 48 he prophesies that 'the heaven and the earth.....shall sing for Babylon'.

Whatever Seth Prodie may think, that sounds to me like two-part harmony.

Is it possible that Jeremiah's use of the contrary motion alphabet contains a hint of the contrary motion scale?

Does his coupling of Sheshach and Babel refer obliquely to Levitical organum?

Let us take a synthetic leap in the dark.

How may we generate a scale on the analogy of the Athbash alphabet?

If we write out the three seven-note groups of the melodic alphabet *retro*, we get euphony in fifteen out of twenty-one cases.



If we now move the first and last notes of each *retro* group one degree outwards, so as to be a Sheminith, or an eighth, or an octave away from their melodic-scale

counterparts, and ‘reflect’ the melodic scale’s three-beat note tau in the lower octave, we achieve a euphonal reflection of the whole melodic alphabet.



A Sheminith harp would have been tuned as follows.



The word SHEMINITH (shin-mem-yodh-nun-yodh-tau) means ‘eighth’ or ‘octave’. Its first and last letters, shin and tau, may have served to remind musicians that in the Sheminith scale the pitches denoted by s[h]in and tau in the melodic alphabet, *c*’ and *d*’, were both reflected down the octave.

One numerical fact occurs to you suddenly. On your *Personent hodie* psaltery, the note *c* (an octave below *c*’, which is ‘Middle C’) is produced by a string having a unitary length of 972.

And now Miss Benn is going to tell us how the gematric values of the 400 alphabet’s twenty-two letters are linked with the eight notes of the Sheminith scale.

‘All right,’ says Delia. ‘One-beat *d*’, two-beat *d*’, and three-beat *d*’ are represented respectively by aleph = 1, cheth = 8, and samekh = 60. All three notes are sounded by a string which is 432 units long.

$$432 + 1 + 8 + 60 = 501$$

‘One-beat *b*, two-beat *b*, and three-beat *b* are represented respectively by beth = 2, teth = 9, and ayin = 70. All three notes are sounded by a string which is 512 units long.

$$512 + 2 + 9 + 70 = 593$$

‘One-beat *a*, two-beat *a*, and three-beat *a* are represented respectively by gimel = 3, yodh = 10, and pe = 80. All three notes are sounded by a string which is 576 units long.

$$576 + 3 + 10 + 80 = 669$$

‘One-beat *g*, two-beat *g*, and three-beat *g* are represented respectively by dalet = 4, kaph = 20, and tzaddi = 90. All three notes are sounded by a string which is 648 units long.

$$648 + 4 + 20 + 90 = 762$$

‘One-beat *f*, two-beat *f*, and three-beat *f* are represented respectively by he = 5, lamedh = 30, and qoph = 100. All three notes are sounded by a string which is 729 units long.

$$729 + 5 + 30 + 100 = 864$$

‘One-beat *e*, two-beat *e*, and three-beat *e* are represented respectively by wau = 6, mem = 40, and resh = 200. All three notes are sounded by a string which is 768 units long.

$$768 + 6 + 40 + 200 = 1014$$

‘One-beat *c*, two-beat *c*, and three-beat *c* are represented respectively by zayin = 7, nun = 50, and s(h)in = 300. All three notes are sounded by a string which is 972 units long.

$$972 + 7 + 50 + 300 = 1329$$

‘The perpetually three-beat *d* is represented by tau = 400, and it is sounded by a string which is 864 units long.

$$864 + 400 = 1264$$

‘I’ve finished,’ says Miss Benn.

All four of us know too many gapped scales from world music to feel uneasy about the gaps in the Sheminith scale. Rosie owns a Hungarian folk recorder, for instance, whose six-finger and seven-finger notes are pitched a third apart.

Aside from instruments, the tone-and-a-half difference between the Sheminith’s first and second notes worries us as little as the tone-and-a-half difference between the second and third notes of the falling harmonic minor scale.

Nonetheless I’m wondering whether Scripture contains any cryptic reference to the shape of the Sheminith scale. As Delia sings its eight notes quietly.....



..... I find myself thinking of Proverbs 24. 16.

כי שבע יפול צדיק וקם ורשעים יכשלו ברעה

For a just man falleth seven times, and riseth up again:

but the wicked shall fall into mischief.

(A just man falling SEVEN times may be taken to denote the scalar descent which is delineated by SEVEN consecutive notes.)

The eight Hebrew words of this verse have 400-gematric values as follows.

30 372 126 204 146 626 366 277

They have 22-gematric values as follows.

21 39 45 51 38 86 60 43

It turns out that Proverbs chapter TWENTY-FOUR, verse SIXTEEN, has SIXTEEN gematric values which generate TWENTY-FOUR musical numbers relating to the Sheminith scale.

Delia has set out the twenty-four numbers below, according to her own manner.

On the left you can see the eight unitary string-length numbers 432, 512, 576, 648, 729, 768, 972, and 864.

On the right you can see the eight corresposive notation-numbers 69 (aleph plus cheth plus samekh), 81 (beth plus teth plus ayin), 93 (gimel plus yodh plus pe), 114 (daleth plus kaph plus tzaddi), 135 (he plus lamedh plus qoph), 246 (wau plus mem plus resh), 357 (zayin plus nun plus s[h]in), and 400 (tau).

All sixteen numbers are generated by a formula-set of forty-three terms.

| | |
|-----------------------------------|------------------------------|
| 432 = 372 + 60 | 69 = 30 + 39 |
| 512 = 146 + 366 | 81 = 30 + 51 |
| 576 = 372 + 204 | 93 = - 146 + 277 - 38 |
| 648 = 626 - 21 + 43 | 114 = 30 + 39 + 45 |
| 729 = 626 + 60 + 43 | 135 = 30 + 45 + 60 |
| 768 = 30 + 372 + 366 | 246 = 372 - 126 |
| 972 = 30 + 372 + 204 + 366 | 357 = 30 + 366 - 39 |
| 864 = 372 + 126 + 366 | 400 = 626 - 277 + 51 |

The eight Sheminith scale-numbers which Delia has worked out for us are generated by a formula-set of twenty-eight terms.

| | | |
|------------------|---------------|--------------------------------|
| 432 + 69 | = 501 | = 626 - 39 - 86 |
| 512 + 81 | = 593 | = 30 + 372 + 277 - 86 |
| 576 + 93 | = 669 | = 626 + 43 |
| 648 + 114 | = 762 | = 372 + 366 - 21 + 45 |
| 729 + 135 | = 864 | = 372 + 126 + 366 |
| 768 + 246 | = 1014 | = 204 + 146 + 626 + 38 |
| 972 + 357 | = 1329 | = 626 + 366 + 277 + 60 |
| 864 + 400 | = 1264 | = 126 + 146 + 626 + 366 |

In addition, the Hebrew phrase rendered ‘on the Sheminith’ (ayin-lamedh he-shin-mem-yodh-nun-yodh-tau) has a 400 gematric value of 915, and the number 915 is generated by a four-term formula.

$$915 = 626 + 366 - 39 - 38$$

The twenty-four musical numbers contain altogether seventy-two digits, and the 400 gematric value of ‘Sheminith’ contains three digits, so seventy-five digits are generated by an overall formula-set of seventy-five terms.

‘I’ve noticed something that may well be an accident,’ says Miss Benn. ‘In 400 gematria the verse adds up to 2147.’ She pauses. ‘That total may be interpreted so as to participate in formulae for the two biggest Sheminith numbers.’ Delia points to a page.

$$[21 \times 47] + 277 \text{ [last word]} = 1264$$

$$[21 \times 47] - 30 + 372 \text{ [first two words]} = 1329$$

I can’t believe that what Delia has found represents an accident. There is more to be found in Proverbs 24. 16, and even in the number 915, but I’ll leave my readers to investigate on their own while we four adjourn to the dining-room.

After partaking of a moderate collation, we look at I Chronicles 15. 17- 21.

So the Levites appointed Heman the son of Joel; and of his brethren, Asaph the son of Berechiah; and of the sons of Merari their brethren, Ethan the son of Kushaiah; And with them their brethren of the second degree, Zechariah, Ben, and Jaaziel, and Shemiramoth, and Jehiel, and Unni, Eliab, and Benaiah, and Maaseiah, and Mattithiah, and Elipheleh, and Mikneiah, and Obed-edom, and Jeiel, the porters. So the singers, Heman, Asaph, and Ethan, were appointed to sound with cymbals of brass; And Zechariah, and Aziel, and Shemiramoth, and Jehiel, and Unni, and Eliab, and Maaseiah, and Benaiah, with psalteries on Alamoth; And Mattithiah, and Elipheleh, and Mikneiah, and Obed-edom, and Jeiel, and Azariah, with harps on the Sheminith to excel.

For the first time you notice something strange about the *second* and the *seventh* of the first eight musicians who are mentioned in verse 18.

Zechariah, Ben, and Jaaziel, and Shemiramoth, and Jehiel, and Unni, Eliab, and Benaiah.....

These eight musicians appear in the first forty-four letters of the Hebrew text as follows. (I’ll print each conjunctive wau [= and] in large type.)

זכריהו בן ויעזיאל ושמירמות ויהיאל ועני אליאב ובניהו

How might we expect the eight names to be set out?

Zechariah, AND Ben, AND Jaaziel, AND Shemiramoth, AND Jehiel, AND Unni, AND Eliab, AND Benaiah.....

Here is what we get.

Zechariah, Ben, AND Jaaziel, AND Shemiramoth, AND Jehiel, AND Unni, Eliab, AND Benaiah.....

Look back to the two *ANDs* which appear on the bottom line of page 227. Then ask yourself why the conjunction is omitted both before the name of Ben and before the name of Eliab in I Chronicles 15. 18.

Seth Prodie is at one with the many commentators who find the omission unworthy of attention. But if the Chronicler took the trouble to do something, we should ask *why he did it*. [At the time of writing (2011), two politicians whom I respect -- Herr Karl-Theodor zu Guttenberg, and Frau Silvana Koch-Mehrin – have been pilloried for committing acts of plagiarism in their doctoral theses. Here are two questions which need to be asked. First, how competent or how diligent were their supervisors and their examiners? Secondly, why should people trust the universities?] Only a careless reader will assume that the Chronicler was a careless writer. Here is a simple axiom, followed by its corollary. The correct interpretation of a technical text requires WORK. Those who refuse to do the necessary amount of work are not scholars, but idlers. Consider the behaviour of a Canadian commentator whom we shall call Lexis Picot. The said Picot is confronted by a passage of Hebrew that contains both musical technicalities and an unusual piece of language. Now the man happens to know nothing about music. Yet when you ask him to comment on the unusual piece of language, Picot presumes in his ignorance to make a magisterial pronouncement: ‘I don’t really think that the unusual piece of language is worthy of special attention.’ Let me interpret that pronouncement. ‘Forget about a conspicuous fact, and close your eyes to what may be an important piece of information, because I’m the commentator, and I can’t be bothered to work at the text.’

Listen! An intelligent writer does things for a reason. An intelligent reader looks for the reason. And whether he is confronted by two ‘missing’ waus, or by one ‘extra’ he, a real scholar will never be content to conjure a vacuous verdict out of his own idleness. In Ecclesiastes 7. 27 the words אמרה קהלת should really be rendered *said the Preacheress*, because the verb-form אמרה (= said she) is feminine. Let me translate the whole verse with an eye to the genders of words.

ראה זה מצאתי אמרה קהלת אחת לאחת למצא חשבון

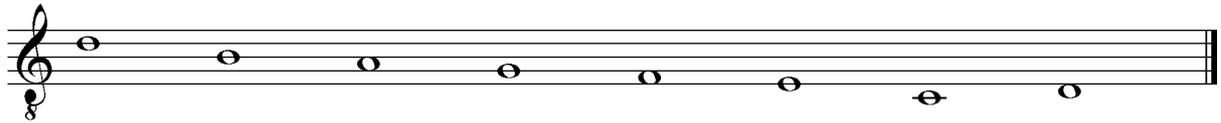
(= Here is the intractably masculine fact which I have discovered, said the Preacheress, as an unmanly one conjoined with an unmanly one, while trying to acquire a perfect understanding of what maleness is).

When idle commentators find אמרה instead of a normal אמר, they pronounce the verb-form to be ‘dubious’. Honest readers wrestle with אמרה. Before long they discern what lies below the surface of Ecclesiastes 7. 23-29. Remorseful Solomon is not talking about women. He is refuting the theorist Karl Heinrich Ulrichs, using language that Ulrichs himself would have understood. In 400 Hebrew gematria, the enigmatically unspecific word חשבון has the same value as the phrase כל האיש (= here not ‘every man’, but ‘human maleness in its totality’).

An intelligent writer does things for a reason. Thus in *Greenmantle* John Buchan takes care to let us know that Stumm’s forename is ULRIC. (Note that *Ulric* is ULRICHS minus HS.) Buchan’s subtle subtext harmonizes with his explicit text.

I began to see the queer other side to my host, that evil side which gossip had spoken of as not unknown in the German army.....I was more than ever afraid of Stumm.

Back to missing waus. Two conjunctions are absent from the MUSICAL passage which we find in I Chronicles 15. Of course they are absent for a MUSICAL reason. The Chronicler is at pains to represent two gaps in the Sheminith scale. One gap comes between the first and second notes of the scale. That gap is represented by the omission of a conjunction between Zechariah and Ben. Another gap comes between the sixth and seventh notes of the scale. *That* gap is represented by the omission of a conjunction between Unni and Eliab.



Zechariah, Ben, AND Jaaziel, AND Shemiramoth, AND Jehiel,
AND **Unni, Eliab**, AND Benaiah.....

‘I’ve seen something else which relates to the gaps,’ says Rosie. ‘Go back to the eight 400 gematric values of Proverbs 24. 16, and look at the fourth value.’ Miss Stone points to a page of her notebook.

30 372 126 204 146 626 366 277

‘The number 204 stands for the two gaps in the Sheminith scale,’ she continues. ‘First, 204 is the difference between $e = 768$ and $c = 972$. Secondly, 204 may be read as 20×4 to give 80, which is the difference between $d' = 432$ and $b = 512$.’

Here’s what Rosie has told us about the Sheminith notes e , c , d' and b .

*The sixth note e is produced by a string having a notional length of 768 units.
The seventh note c is produced by a string having a notional length of 972 units.
The difference between 768 and 972 is 204.*

*The first note d' is produced by a string having a notional length of 432 units.
The second note b is produced by a string having a notional length of 512 units.
The difference between 432 and 512 is 80, or 20×4 .*

‘Look at the fifth Hebrew word of the verse, which is rendered *and riseth up again*,’ says Delia. ‘That word has a 400 gematric value of 146, and a 22 gematric value of 38.’ She pauses. ‘The difference between 146 and 38 is 108, which is also the difference between $d = 864$ and $c = 972$.’

Here’s what Delia has told us about the Sheminith notes c and d .

*The seventh note c is produced by a string having a notional length of 972 units.
The eighth note d is produced by a string having a notional length of 864 units.
The difference between 972 and 864 is 108, or $146 - 38$.*

You can see how the fourth and fifth words of Proverbs 24. 16 are freighted with information about FIVE NOTES of the Sheminith scale: d' , b , e , c , and d .

‘There’s more,’ says Miss Benn. ‘The third and fourth words of the verse tell us something about the remaining three notes a , g , and f .’ She looks down at her notebook. ‘The 22 gematric values of the third and fourth words are respectively 45 and 51, which multiply to give 2295.’ Delia pauses. ‘What are the Sheminith scale-numbers for the notes a , g , and f ? Respectively 669, 762, and 864. Those three scale-numbers add up to give 2295. Look.’

$$45 \times 51 = 2295 = 669 (= \text{Sheminith } a) + 762 (= \text{Sheminith } g) + 864 (= \text{Sheminith } f)$$

Let me address all my readers for a moment. If you want to corroborate what we've already learned about the Sheminith scale, you should study in private the Hebrew texts of four passages: Proverbs 24. 16, I Chronicles 15. 17-21, the heading of Psalm 6, and the heading of Psalm 12. Be prepared to work gematrically in terms of both the 400 alphabet and the 22 alphabet. See what you can find out on your own. For the present.....

'Listen, you lot!' A well-known actress has risen to her feet.

*'When a Lemon Anemone fails
To ingeminate Yemenite quails,
Supereminent tales
Of the Flemings in Wales
Will disseminate Sheminith scales.'*

Whoever composed that limerick deserves to be soundly thrashed.

'Who is he that condemneth?' Miss Benn speaks in her Innocent Circe voice.

Who is she that looketh so pleased with herself? Please come and lend me your aid in the kitchen, Paradisal Phoenix. Rosie and her beloved will occupy themselves in our absence with Sheminith scales. While the kettle is boiling, you can examine two pictures: *St Basil's Church in Moscow*, painted by Whittaker's cousin, and *Miss Jane Dascey standing in the sea*, painted by some other artist.



Fifteen minutes later, we return to our studies.

We can work out a certain amount from the Hebrew word Sheminith, which means 'eighth' or 'octave', but what are we to do with the Hebrew word Alamothe, which means 'girls', 'maidens', or 'virgins'?

'Alamothe was almost certainly another scale,' you say.

Suppose that it was. May it have employed approximately the same compass as the melodic and Sheminith scales? That would mean having all three parts contained by the range of a major ninth, which is credible enough. (As we've already observed, the three parts of Georgian sacred music are all contained by the range of a major tenth.)

What note did the Alamothe scale start on? Well, if Alamothe used the same compass as the melodic and Sheminith scales, and if euphony was a

consideration, then when the melody has a bottom *d* and the Sheminith part had a top *d'*, the Alamothe part would have had either *f*, *g*, or *a* – something in the middle. In the middle! Sheminith expresses the musical principle *Ma FIN est mon commencement*. Does Alamothe express the principle *Mon CENTRE est mon commencement*?

That reminds me. We got on to Sheminith after looking at Jeremiah's use of the contrary motion Hebrew alphabet. But there is also a chiasmic Hebrew alphabet, the so-called 'Albam', in which aleph is represented by lamedh, beth is represented by mem, and so on.

THE ALBAM ALPHABET

aleph = lamedh, beth = mem, gimel = nun, dalet = samekh, he = ayin
 wau = pe, zayin = tzaddi, cheth = qoph, teth = resh, yodh = s[h]in
 kaph = tau, lamedh = aleph, mem = beth, nun = gimel
 samekh = dalet, ayin = he, pe = wau, tzaddi = zayin
 qoph = cheth, resh = teth, s[h]in = yodh, tau = kaph

Isaiah uses the chiasmic alphabet in the seventh chapter of his prophecy. After calling Pekah 'the son of Remaliah' in verses 1, 4, and 5, he describes him in verse 6 as 'the son of Tabeal'.

רמליהו בן (= son of Remaliah) becomes טבאל בן (= son of Tabeal).

TABEA-L is a cryptic Albam form of REMAL-IAH (with resh-mem-lamedh becoming teth-beth-aleph). Isaiah 7. 6 reads as follows in the AV:

Let us go up against Judah, and vex it, and let us make a breach therein for us, and set a king in the midst of it, even the son of Tabeal.....

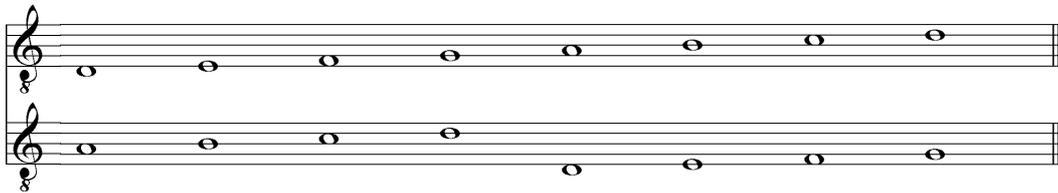
The Hebrew word rendered IN THE MIDST OF IT (= in the midst of Judah) may be a key to the cipher, since the Albam alphabet, so to speak, starts in the middle. Isaiah's use of the Albam alphabet in 7. 6 may be intended to show that he knew the codes in which certain people were writing. But has it anything to do with Alamothe, or with music in general? Perhaps. In Isaiah 7. 14 we read,

הנה העלמה הרה (= behold, the [not a] VIRGIN will conceive).

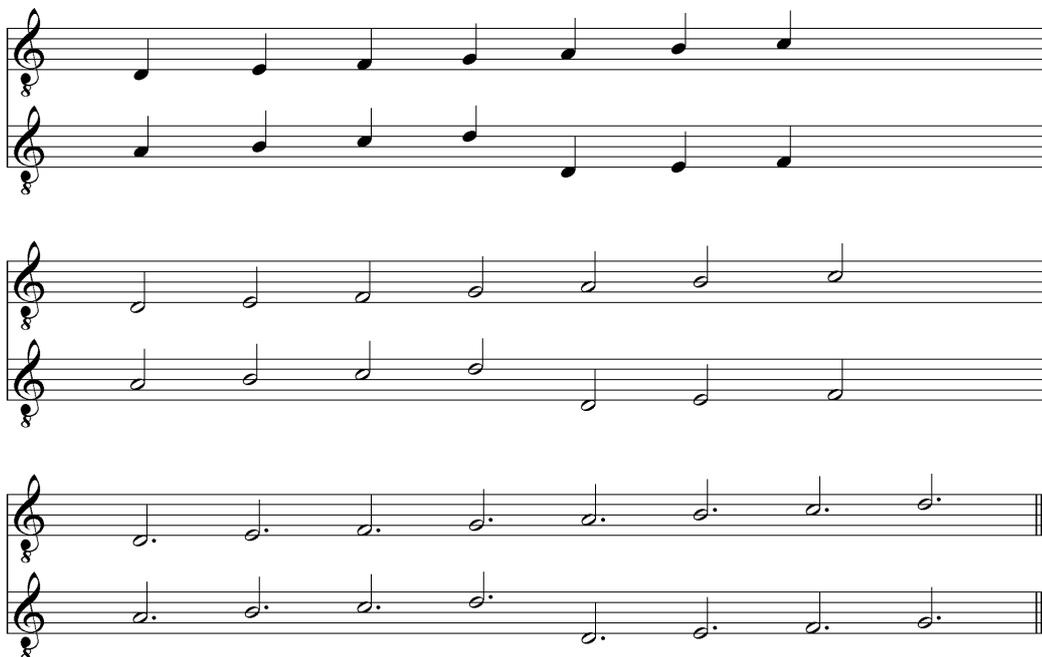
Look at the four-letter Hebrew word for 'virgin', which is printed in large type above (the preficial *he* is a definite article). That word is spelled ayin-lamedh-mem-he, and it is the singular of ALAMOTH. Is there any link between the Albam alphabet and the Alamothe scale?

Does the Alamoth scale 'start in the middle'?

When we bend the melodic scale back upon itself, in the manner of the Albam alphabet, we get a scale which accompanies the melodic scale in perfect fifths.



If the eight notes of that putative Alamoth scale were played on eight consecutive strings of an Alamoth psaltery, then the twenty-two notes of David's melodic system would have been accompanied as follows.



Why would such a system be called Alamoth (ayin-lamedh-mem-wau-tau)?

הַעֲלָמָה (= the virgin) has a 22 gematric value of 51.

The number 51 may be taken to indicate that five becomes one, and that one becomes five. Here is how the melodic scale gives birth to the Alamoth scale.

- Note 5 of the melodic scale is note 1 of the Alamoth scale.
- Note 6 of the melodic scale is note 2 of the Alamoth scale.
- Note 7 of the melodic scale is note 3 of the Alamoth scale.
- Note 8 of the melodic scale is note 4 of the Alamoth scale.
- Note 1 of the melodic scale is note 5 of the Alamoth scale.
- Note 2 of the melodic scale is note 6 of the Alamoth scale.
- Note 3 of the melodic scale is note 7 of the Alamoth scale.
- Note 4 of the melodic scale is note 8 of the Alamoth scale.

The inarticulate singular form ayin-lamedh-mem-he (= virgin) becomes ayin-lamedh-mem-wau-tau (virgins) in the plural.

עלמות (= Alamoth) has a 400 gematric value of 546.

While the Hebrew musical term Sheminith is articulate in I Chronicles 15. 21, as also in the headings of Psalm 6 and Psalm 12, the Hebrew musical term Alamoth is inarticulate in I Chronicles 15. 20 and in the heading of Psalm 46.

I'm inclined to see the inarticulate form of Alamoth as being designed to express a necessary gematric value.

In 400 gematria Alamoth adds up to a number (546) which may be interpreted so as to yield four mnemonics.

546 interpreted as $5 + 4 + 6 = 15$

ONE BECOMES FIVE, AND FIVE BECOMES ONE.

546 factorized as $26 \times 3 \times 7$

TWO BECOMES SIX, AND SIX BECOMES TWO.

THREE BECOMES SEVEN, AND SEVEN BECOMES THREE.

546 interpreted as $54 - 6 = 48$

FOUR BECOMES EIGHT, AND EIGHT BECOMES FOUR.

Now Miss Benn is going to tell us how the gematric values of the 400 alphabet's twenty-two letters are linked with the eight notes of the Alamoth scale.

'Very well,' says Delia. 'One-beat *a*, two-beat *a*, and three-beat *a* are represented respectively by aleph = 1, cheth = 8, and samekh = 60. All three notes are sounded by a string which is 576 units long.

$$576 + 1 + 8 + 60 = 645$$

'One-beat *b*, two-beat *b*, and three-beat *b* are represented respectively by beth = 2, teth = 9, and ayin = 70. All three notes are sounded by a string which is 512 units long.

$$512 + 2 + 9 + 70 = 593$$

'One-beat *c*', two-beat *c*', and three-beat *c*' are represented respectively by gimel = 3, yodh = 10, and pe = 80. All three notes are sounded by a string which is 486 units long.

$$486 + 3 + 10 + 80 = 579$$

'One-beat *d*', two-beat *d*', and three-beat *d*' are represented respectively by dalet = 4, kaph = 20, and tzaddi = 90. All three notes are sounded by a string which is 432 units long.

$$432 + 4 + 20 + 90 = 546$$

'One-beat *d*, two-beat *d*, and three-beat *d* are represented respectively by he = 5, lamedh = 30, and qoph = 100. All three notes are sounded by a string which is 864 units long.

$$864 + 5 + 30 + 100 = 999$$

'One-beat *e*, two-beat *e*, and three-beat *e* are represented respectively by wau = 6, mem = 40, and resh = 200. All three notes are sounded by a string which is 768 units long.

$$768 + 6 + 40 + 200 = 1014$$

'One-beat *f*, two-beat *f*, and three-beat *f* are represented respectively by zayin = 7, nun = 50, and s(h)in = 300. All three notes are sounded by a string which is 729 units long.

$$729 + 7 + 50 + 300 = 1086$$

'The perpetually three-beat *g* is represented by tau = 400, and it is sounded by a string which is 648 units long.

$$648 + 400 = 1048$$

'I've found an interesting piece of language in Song of Solomon 6. 8,' Delia continues. 'What Proverbs 24. 16 does for Sheminith, Song of Solomon 6. 8 does for Alamoth. Look.' She sets down a page on the table.

ששים המה מלכות ושמנים פילגשים ועלמות אין מספר

There are threescore queens, and fourscore
concubines, and virgins (ALAMOTH) without number.

The eight Hebrew words of this verse have 400 gematric values as follows.

650 50 496 446 473 552 61 380

They have 22 gematric values as follows.

65 23 64 77 86 75 25 65

The eight Alamoth scale-numbers are generated by a formula-set of twenty-four terms.

$$\begin{array}{rclcl} 576 + 69 & = & 645 & = & 473 + 552 - 380 \\ 512 + 81 & = & 593 & = & 446 + 61 + 86 \end{array}$$

| | | | | |
|-----------|---|-------------|---|----------------------------|
| 486 + 93 | = | 579 | = | - 446 + 473 + 552 |
| 432 + 114 | = | 546 | = | 50 + 496 |
| 864 + 135 | = | 999 | = | 446 + 552 + 65 - 64 |
| 768 + 246 | = | 1014 | = | 650 + 473 - 23 - 86 |
| 729 + 357 | = | 1086 | = | 473 + 552 + 61 |
| 648 + 400 | = | 1048 | = | 496 + 552 |

‘Here are two important things that leap to the eye,’ says Miss Benn. ‘First, the third word of the verse, which means *queens*, has a 400 value of 496 and a 22 value of 64. 496 minus 64 is 432, so the word for *queens* encodes the only gap in the Alamo scale, the gap of 432 units that comes between 432 *d’* and 864 *d*. Secondly, the Alamo number for the note *d’* is 546, and the 400 gematric value of the Hebrew word Alamo is 546, so the very name of the Alamo scale encodes its highest note.’

I reckon that Delia’s great diligence deserves a reward. The six lines of Clerihevian verse which appear below are respectfully dedicated to Miss Benn by their author.

*Alexander Fleming was made a knight!
He discovered penicillin without becoming an adopter
Of silly doctrines from Lilliput.*

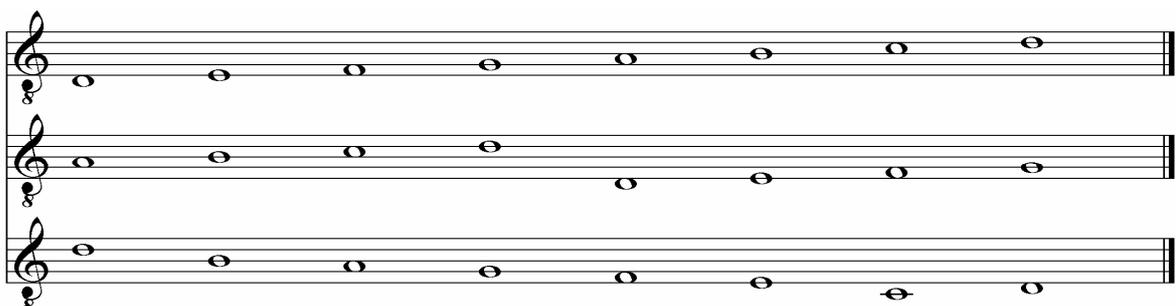
*The Alamo scale and Sir Almroth Wright
Had nothing to do with Dylan Thomas, or with lepidoptera,
Or with the fortress of Alamut.*

[Exit POET, pursued by flagelliferous TISIPHONE.]

Now let me address all my readers once again. If you want to corroborate what we’ve already learned about the Alamo scale, you should study in private the Hebrew texts of three passages: Song of Solomon 6. 8, I Chronicles 15. 17-21, and the heading of Psalm 46. Be prepared to work gematrically in terms of both the 400 alphabet and the 22 alphabet. See what you can find out on your own.

Davidic harmony normally involved three different choirs: the melodic choir, the Alamo choir, and the Sheminith choir. You can find all three choirs in I Chronicles 6. 33-48. Read the passage first in the Good News Bible, and then in the AV.

What-ho! It’s time to bring the whole harmonic system together. If what we’ve said so far is true, then David’s three scales ran as follows (melodic scale on the top, Sheminith scale at the bottom, and Alamo scale in the middle).



The melodic scale starts *at the beginning* of the white-note scale of D, while the Sheminith scale starts *at the end*, and the Alamothe scale starts *in the middle*.

You ask yourself dolefully how any one piece of Scripture might encode all three of these facts. Suddenly you recall verse 26 of Psalm 68 (AV, verse 25).

קדמו שרים אחר נגנים בתוך עלמות תופפות

*The singers went before, the players on instruments followed after;
among them were the damsels playing with timbrels.*

The verse's seven Hebrew words may be rendered as follows.

| | | |
|--------|---|--|
| שרים | = | singers |
| קדמו | = | went at the beginning |
| נגנים | = | harpers (players of נגינות = Neginoth) |
| אחר | = | behind, or at-the-rear |
| בתוך | = | in the middle |
| עלמות | = | damsels (<i>Alamothe</i>) |
| תופפות | = | drumming |

Where do we read about players of *Neginoth*? In Psalm 6, whose heading runs (AV), *To the chief Musician on Neginoth upon Sheminith*.

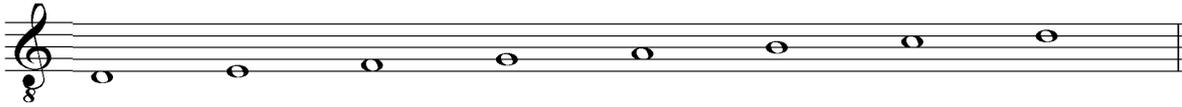
You wonder if the *Neginoth*-players of Psalm 68 are understood to be playing upon Sheminith.

The seventh Hebrew word of the verse has a 400 gematric value of 972, and it denotes the seventh string of the Sheminith scale.

Then we have the sixth Hebrew word of the verse, which is rendered 'damsels' in the AV.

That word is Alamothe (ayin-lamedh-mem-wau-tau), and the girls whom it primarily denotes are described as having been **IN THE MIDDLE**.

Now of course Psalm 68. 26 is depicting the order of a real musical procession, but the verse has a secondary cryptical meaning which relates to the eight-note scale *d e f g a b c' d'*.



Singers of the MELODIC scale start at the BEGINNING,
 Neginoth-players of the SHEMINITH scale start at the END, and
 players of the ALAMOTH scale start in the MIDDLE.

The seven Hebrew words of Psalm 68. 26 have 400 gematric values as follows.

150 550 209 153 428 546 972

They have 22 gematric values as follows.

42 64 29 54 41 69 90

These fourteen values generate a ninety-term formula-set which covers all nine string-length numbers and all twenty-four string-length-plus-notation numbers of David's harmonic system. Delia has set out the whole set of formulae for us.

| String-lengths | Melodic scale-numbers |
|-------------------------|--------------------------------|
| $972 = 972$ | |
| $864 = -150 + 972 + 42$ | $933 = 428 + 546 - 41$ |
| $768 = -150 + 972 - 54$ | $849 = 550 + 209 + 90$ |
| $729 = -153 + 972 - 90$ | $822 = -150 + 972$ |
| $648 = 550 + 29 + 69$ | $762 = -150 + 550 + 209 + 153$ |
| $576 = 150 - 546 + 972$ | $711 = 550 + 209 + 42 - 90$ |
| $512 = -550 + 972 + 90$ | $758 = -150 + 209 + 153 + 546$ |
| $486 = 550 - 64$ | $843 = 550 + 209 + 153 - 69$ |
| $432 = 550 - 64 - 54$ | $832 = 150 + 550 + 42 + 90$ |

| Sheminith scale-numbers | Alamoth scale-numbers |
|--------------------------------|-------------------------------|
| $501 = 550 + 41 - 90$ | $645 = 153 + 428 + 64$ |
| $593 = 550 + 153 - 41 - 69$ | $593 = 550 + 153 - 41 - 69$ |
| $669 = 546 + 54 + 69$ | $579 = 153 - 546 + 972$ |
| $762 = -150 + 550 + 209 + 153$ | $546 = 546$ |
| $864 = -150 + 972 + 42$ | $999 = 972 - 42 + 69$ |
| $1014 = 972 + 42$ | $1014 = 972 + 42$ |
| $1329 = 150 + 153 + 972 + 54$ | $1086 = 150 + 550 + 428 - 42$ |
| $1264 = 209 + 972 + 29 + 54$ | $1048 = 550 + 546 + 42 - 90$ |

What next? If you like, you can study the mnemonic dominoes of page 357 with a magnifying glass. (Fearful readers should go straight to page 358.) It is possible that pertinent dominoes were branded on particular Davidic instruments with a 77-pin iron, and that they had their 'significant' holes filled with red paint. Levitical musicians may have thought of the dominoes as jewelled breastplates.

ARE THESE DOMINOES THE FIRST EVER JACQUARD CARDS?

Underneath Psalm 18. 1 you see the 400 gematric values (**bold type**) of its 77 Hebrew letters, set out in a grid.

למנצח לעבד יהוה לדוד אשר דבר ליהוה את דברי השירה הזאת ביום הציל יהוה אותו מכף כל איביו ומיד שאול

(= For the chief musician: of the servant of the LORD, of David, who spoke to the LORD the words of this song in the day that the LORD delivered him from the hand of all his enemies, and from the hand of Saul).

| | | | | | | | | | | | | | |
|-----|------------|-----|------------|-----|------------|-----|------------|-----|------------|-----|------------|-----|------------|
| 01. | 030 | 02. | 040 | 03. | 050 | 04. | 090 | 05. | 008 | 06. | 030 | 07. | 070 |
| 08. | 002 | 09. | 004 | 10. | 010 | 11. | 005 | 12. | 006 | 13. | 005 | 14. | 030 |
| 15. | 004 | 16. | 006 | 17. | 004 | 18. | 001 | 19. | 300 | 20. | 200 | 21. | 004 |
| 22. | 002 | 23. | 200 | 24. | 030 | 25. | 010 | 26. | 005 | 27. | 006 | 28. | 005 |
| 29. | 001 | 30. | 400 | 31. | 004 | 32. | 002 | 33. | 200 | 34. | 010 | 35. | 005 |
| 36. | 300 | 37. | 010 | 38. | 200 | 39. | 005 | 40. | 005 | 41. | 007 | 42. | 001 |
| 43. | 400 | 44. | 002 | 45. | 010 | 46. | 006 | 47. | 040 | 48. | 005 | 49. | 090 |
| 50. | 010 | 51. | 030 | 52. | 010 | 53. | 005 | 54. | 006 | 55. | 005 | 56. | 001 |
| 57. | 006 | 58. | 400 | 59. | 006 | 60. | 040 | 61. | 020 | 62. | 080 | 63. | 020 |
| 64. | 030 | 65. | 001 | 66. | 010 | 67. | 002 | 68. | 010 | 69. | 006 | 70. | 006 |
| 71. | 040 | 72. | 010 | 73. | 004 | 74. | 300 | 75. | 001 | 76. | 006 | 77. | 030 |

Having noted the position of each numerical value in the grid, we add up the values which are denoted by bold os below.

The eight unitary string-lengths of the melodic scale *d e f g a b c' d'* (864 768 729 648 576 512 486 432), and 972 c

| | | | | | | | | | |
|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------|----------------|
| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
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| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |

The eight notation-numbers of the melodic scale *d e f g a b c' d'* (933 849 822 762 711 758 843 832)

| | | | | | | | | | |
|---------|---------|---------|---------|----------------|----------------|----------------|----------------|----------------|----------------|
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The eight notation-numbers of the Alamo scale *a b c' d' d e f g* (645 593 579 546 999 1014 1086 1048)

| | | | | | | | | | |
|---------|---------|----------------|----------------|---------|---------|---------|----------------|----------------|----------------|
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| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
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| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |

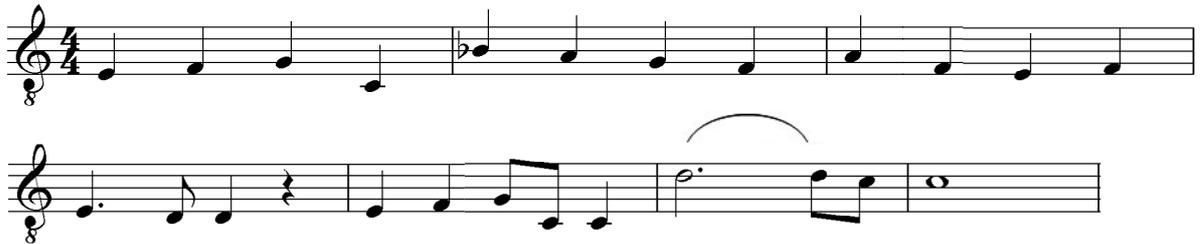
The eight notation-numbers of the Sheminith scale *d' b a g f e c d* (501 593 669 762 864 1014 1329 1264)

| | | | | | | | | | |
|---------|---------|---------|---------|----------------|---------|---------|---------|----------------|----------------|
| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
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| 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 | 0000000 |
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Now we'll write out all sixty-six notes of David's three-part harmonic system.

'Don't waste your time,' cries Hoagie Caruso McLoy, author of *Poematic Emanations*. 'What you call "David's system" is polluted with unsingable intervals. Apart from the matter of sevenths and tritones in the *melodic* lines, your Alamo and Sheminith lines are doomed to have many bizarre leaps of a seventh. Furthermore, whenever your melodic part has a leap of a seventh from *c*' to *d*, your Sheminith part will have a nighmarish leap of a ninth from *c* to *d*'.

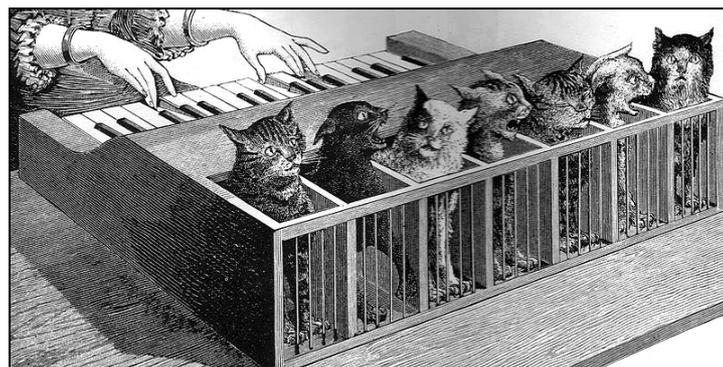
As the Azerbaijani poet Ramiz Rövşan said, *Nə hirsələ oxuyur bu quş* (= How angrily this bird sings)! Listen, you loser. The leap of a seventh is no problem to any musician. Neither is the leap of a ninth. George Michael's song 'Freedom' is memorable largely because of its melodic sevenths and ninths.



And one of the most popular hymn-tunes of the last thirty years, *Tyrol*, contains no less than three ninths, three sevenths, and three tritones.



McLoy is a dismal theorist. He makes no musical use of his voice. He doesn't listen to the radio. He isn't a churchgoer. How can he talk about 'unsingable intervals'? As the Inuit song says, *huqulasuiquq niblirtinajuqtuq* (= he never sings, but merely howls). Those who believe that certain things are impossible tend to be ignorant. What is bizarre about the interval of a seventh?



‘A musician who sings in unison with the notes that he plays on a harp or a psaltery won’t find *any* interval unsingable,’ says Delia.

That is a most acute observation. But let’s move on! Here are the sixty-six notes of David’s harmonic system (melodic scale on the top, Sheminith scale at the bottom, and Alamothe scale in the middle). Each note of the melodic scale acts as partner to a particular note from each of the two harmony-scales. Or as Karel H Mácha would say in English, *Birch leans against pine, and pine against birch*. How does Isaiah 9. 21 begin? *Manasseh, Ephraim; and Ephraim, Manasseh.....*



The observation of a great Czech poet leads you to perceive what is really the most remarkable feature of David’s harmonic system. *All the musicians, whatever part they perform, read from the same alphabetical notation*. It reminds you of the time when you used to play different mouthpiece instruments in a band. No matter what the instrument was, you read treble clef and worked with three valves.

‘We should perform a couple of David’s compositions in three parts before we stop,’ says Delia.

So we should. Let’s begin with Psalm 124, and then we’ll perform *The Song of the Bow*. Although Seth Prodie and Hoagie McLoy have disappeared, the fifth Elsie is still here, and she can read music. In both pieces Delia will sing the melody, the fifth Elsie will sing the Sheminith part, and Rosie will sing the Alamothe part. All three girls will sing their notes, an octave higher than written, to *la*. Before they start, let me recruit every one of my musical readers as an

assistant in the project of reviving the ancient music of Israel. Let me also say something about the matter of immediate performance. We have extracted from a number of Hebrew texts what may be called raw melodies. We're going to let those melodies stand as musical entities in their raw form. Here's what I mean. It is not part of our present purpose to furnish each melody with its particular Hebrew text. I want my musical readers to perform the ancient compositions which we have transcribed, and to involve themselves actively in the project by writing their own texts. I don't want to burden them unnecessarily by making them sing in Hebrew. (Are a few readers disappointed? Well, I'm sorry, but we have to live in the real musical world. I'll print a Hebrew version of one psalm in chapter 17.) Most people are no more willing to sing in Hebrew than they are to sing in Cornish, which is a musical language in its own right.

EARLY MUSICAL TERMS IN CORNISH AND ENGLISH

my a gan an conternot

ha ty dyscant ym-kenner

(= We'll sing in harmony: I'll take the counternote part,
And you can take the descant part).

From the medieval Cornish drama *Origo Mundi*

Your quere nor organ songe shall wante

With countre-note and dyscant.....

From *The Squire of Low Degree*

Here are four bits of advice for any readers who want to turn pages 362 and 363 into two living trios. First, ask your three performers to stand at least six feet apart. Secondly, write an English text of four or five stanzas (based on some version of the English Bible) which fits the notes. Thirdly, if you want to give the trios an instrumental performance, use three instruments which have noticeably different tone-colours, like viola, bassoon, and trombone. Fourthly, whatever you do, don't try to play the three parts on a keyboard instrument of any kind.

From a car radio in the street come three bits of music: the *Fledermaus* overture, then *Peter and the Wolf*, then Nellie Melba singing 'Lo, hear the gentle lark'. Delia stands up like a Daniel come to judgment. Gravely she weaves four words of Ben Jonson and twelve words of H W Longfellow into a unified composition.

'Flittermice with leather wings
Followed the werewolf's bark,
Until the soaring lark
Sang from the meadow.'

ONLY A WORKMAN CAN APPRECIATE GOOD TOOLS

Not long ago I was lecturing at an academic conference in London. In the course of my lecture I said that the psalmists always encoded the musical notation of their psalms *in the Hebrew text*. At the end a man raised his hand. 'Why wouldn't they have used two separate systems -- one for the text, and one for the music?' he asked angrily. The answer, for those who are able to understand it, is that the greatest art employs only those resources which are necessary. Tee hee! Not everyone marvels at good sense. If the angry man ever sees me dismantling wooden boxes, he'll ask me two questions. *Why do you use a claw hammer? Why don't you use a hammer for driving in nails, and a separate tool for pulling them out?*

(What I say now will please my Reformed Presbyterian friends inordinately, but it can't be helped. If you have good enough singers, you can perform the Davidic psalms without using musical instruments. The harmony is the important thing.)

Psalm 124

The musical score for Psalm 124 is presented in four systems. Each system contains three staves: a top staff for the MELODY, a middle staff for SHEMINITH, and a bottom staff for ALAMOTH. The first system also includes SATB vocal parts, with the top staff labeled 'M' (Male), the middle 'S' (Soprano), and the bottom 'A' (Alto). The music is written in a single melodic line on a treble clef staff with a key signature of one flat (B-flat) and a common time signature (C). The notes are primarily quarter and eighth notes, with some dotted notes. The score concludes with a double bar line at the end of the fourth system.

The Song of the Bow

MELODY

SHEMINITH

ALAMOTH

The first system of music consists of three staves. The top staff is labeled 'MELODY' and contains a sequence of notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The middle staff is labeled 'SHEMINITH' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The bottom staff is labeled 'ALAMOTH' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4.

M

S

A

The second system of music consists of three staves. The top staff is labeled 'M' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The middle staff is labeled 'S' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The bottom staff is labeled 'A' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4.

M

S

A

The third system of music consists of three staves. The top staff is labeled 'M' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The middle staff is labeled 'S' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The bottom staff is labeled 'A' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4.

M

S

A

The fourth system of music consists of three staves. The top staff is labeled 'M' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The middle staff is labeled 'S' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The bottom staff is labeled 'A' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4.

M

S

A

The fifth system of music consists of three staves. The top staff is labeled 'M' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The middle staff is labeled 'S' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The bottom staff is labeled 'A' and contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4.

Be prepared to vary your scoring in different stanzas. You can perform a melody-plus-Sheminith version of *The Song of the Bow*, for example, and then a melody-plus-Alamoth version. You can also perform male-pitch and female-pitch versions in two or three parts. Always remember that the music has a spatial dimension. Make the most of whatever performing space you have. Decide on your own tempo. And don't be afraid to experiment with pitch! Try performing everything at one whole tone below written pitch.

You may be interested to know that *tvísöngur*, the two-part vocal music of Iceland, kept Sheminith and Alamoth alive down to modern times. In the following Icelandic duet (*ÍP*, 304), how many pairs of notes are pure Sheminith?

The musical notation for Icelandic duet (ÍP, 304) consists of two systems of two staves each. The first system has four measures. The second system has four measures. The notes are: G4, A4, B4, C5 (first system); G4, A4, B4, C5 (second system); G4, A4, B4, C5 (third system); G4, A4, B4, C5 (fourth system). The notes G4, A4, and B4 are quarter notes, while C5 is a half note. There are four pairs of notes, one in each measure, which are pure Sheminith.

In the following Icelandic duet (*ÍP*, 801-2), how many pairs of two-beat notes are pure Alamoth?

The musical notation for Icelandic duet (ÍP, 801-2) consists of four systems of two staves each. The first system has four measures. The second system has four measures. The third system has four measures. The fourth system has four measures. The notes are: G4, A4, B4, C5 (first system); G4, A4, B4, C5 (second system); G4, A4, B4, C5 (third system); G4, A4, B4, C5 (fourth system). The notes G4, A4, and B4 are quarter notes, while C5 is a half note. There are four pairs of notes, one in each measure, which are pure Alamoth.

To harmonize is part of being human. Every reader should buy the CD-and-book *Echoes of the Forest: Music of the Central African Pygmies* (Ellipsis Publications, New York, 1995). Let me quote from page 9 of the book, on which the field notes of Colin Turnbull are reproduced.

The round form is used because this is the only form that satisfies two contrasting elements in the Pygmy personality – intense individualism and strong community sense. But in the same way that a straight 4/4 time is confining, so is the round, so as with the time, they break out of it by inverting the melody. They can do this because, using the scale they use, whatever they sing is always in harmony:



The contrasting elements of life are not always in harmony. You recall how Israel suffered under the confining hand of the Midianites. Israel began to break out of her confinement when the musician Gideon put three hundred of his fellow-trumpeters to work. The people of Succoth and Penuel, who tried to stop Gideon advancing, were later punished for their deeds. Correction is part of war. It is also part of scholarship. Page 292 was corrective. So are my next five pages.

Ignore any author who tells you that harmony was unknown in the ancient world. Likewise, ignore any author who makes oracles out of his own notions, whether or not he wears a lot of scholarly apparatus. In *The Archaeomusicology of the Ancient Near East* (Trafford Publishing, 2005), 32, Richard J Dumbrill considers a piece of iconography, and says, ‘.....two blind harpists are playing the same giant frontal symmetric lyre each plucking strings with both hands.....’ Dr Dumbrill goes on to say in a footnote, ‘.....one must not jump to the conclusion that harmony was practised at that time. It is not because we see four hands on that instrument that it means that (sic) the four hands were plucking different strings at the same time. The artists of the past could not freeze action in terms of tenths of a second as one can do nowadays with a photographic camera. They would only have caught the general posture of the musicians. On the other hand, different notes other than those of the octave must have been heard sounded together more than once in a concert of the period, accidentally or not. However, whether they (who?) intended them to be, or perceived them as, harmony is another matter. It is all a matter of teleology. They would not have used harmony because they did not need it and would not have invented it because they felt no creative necessity for it as they would not have had, in any case, the ability to understand it. Harmony appears only very late in the history of music, not before the second millennium AD.’

Dr Dumbrill presents his mere opinions as if they were undeniable axioms. The artists of the past were able only to catch the general posture of their subjects, because he says so. Unspecified people would not have used harmony, because he says so. These people did not need harmony, because he says so. They would not have invented harmony, because he says so. They felt no creative need for harmony, because he says so. Having failed to evolve sufficiently, they would not have had the ability to understand harmony, because he says so. It is all a matter of the ludicrous word *teleology*, because he says so. Harmony appears only very late in the history of music, because he says so.

Oh, dear! What did Poe declare in ‘The Fall of the House of Usher’?

Such opinions need no comment, and I will make none.

‘.....A PASSIONATE DEVOTION TO THE INTRICACIES.....’

Don't imagine that scholars who study the music of antiquity are Unimaginably Learned Persons, or that they ride about in Ancient Assyrian Chariots. These scholars deserve no special status. (The same goes for ancient Assyria.) A man who investigates *any* area of the musical past will address himself to music, to musical texts, and to musical things. If he wants to study music, he must know what musicians can do. If he wants to read texts which are written in a language other than his own, he must be a good linguist. If he wants to explicate difficult texts, he must be an accredited explicator. If he wants to interpret iconography, he must know how scribes and painters and sculptors represent what is real. If he wants to examine particular musical instruments, he must be expert in the pertinent technology. Whether the music that he studies belongs to 1600 AD or to 1600 BC is worse than trivial: my last six sentences apply to him.

A certain area of Solomon's chariot was 'paved with love', but scholars are not at liberty to pave areas of uncertainty with their own predilections. Imagine that Dr Jadwiga Herchen studies the music of ancient Rujukistan. Dr Herchen is fascinated by the Mayan number 1366560, by ancient fertility rites, and by halfway-house forms of musical temperament. Whenever Dr Herchen's field of study confronts her with an evidential gap, she brings one or more of her darlings on to the pitch. Beware of any numerical 'finding' which is not rooted in the competent study of an original text. Beware of the superstition that antiquity was largely occupied with religion and the procreative faculties. Beware of scholars who torment a piece of ancient text on the rack of some rickety theory. Finally, beware of any musicologist who is not chiefly interested in real music.

Anglophone archaeomusicology is presently palsied by three things: a witless obsession with tuning-systems, a woeful ignorance of the Bible, and a belief in its own bombastic propaganda. (In 2009 the website blurb of one well-known archaeomusicologist proclaimed 'his vast knowledge of ancient music'.) Already a lodge manual of silly axioms is beginning to compile itself. These axioms are bound to hinder the work of students who would otherwise approach informative pieces of iconography with unfettered minds. (Axiom 1. *Any ancient Rujuk musician who touches his neck or his thorax with one hand is a singer modifying the sound of his own voice.* Axiom 2. *The musical system of the ancient Rujuks must be apprehended in terms of such-and-such a number of notes.* Axiom 3. *The ancient Rujuks always made the soundboards of their lyres from leather, because wood decayed so quickly in the climate of ancient Rujukistan.*)

Few musical instruments have survived from antiquity, and the value of musical iconography is limited by several factors, so the main business of an archaeo-musicologist must be the reading of texts. But texts are literature, and literature is the business of literate persons. A bit of lame lexical linguistry, grafted on to a degree in music or social anthropology, will not do. Anyone who presumes to explain a difficult piece of ancient literature needs to have a literary track record.

Once archaeomusicology is healed of its palsy, it must do three things. First, it must recruit scholars whose relationship with ancient literature is solidly founded on the study of Latin and Greek. (If you don't know about the boxwood aulos in Ovid, *Metamorphoses* XII. 158 [= *tibia buxi*], you're only fooling about.) Secondly, it must entrust the replication of musical instruments to experienced makers, rather than to voluble theorists. Thirdly, it must produce the kind of academic work that the great university presses will be unafraid to publish.

Let us wait for real charioteers to appear. Nothing obliges us to accredit the incredible. We cannot accord the status of a hippodrome to a skateboard park.

CHAPTER 17: SING YE PRAISES WITH UNDERSTANDING

Мужички за себя постояли (= The peasants stood up for themselves).
Fyodor Dostoevski, *The Karamazov Brothers*

And the baker and candlestickmaker, and Jack and Gill,
Blear'd Goody this and queasy Gaffer that.

C S Calverley, 'The Cock and the Bull'

On the computer-screen Dr Carol Williams is playing the Compenius organ in Fredericksborg, but three of my faithful interlocutors are looking into the fire. Today they and I took part in an eight-hour bowls marathon. We were terrible. In fact, we were so unspeakably awful that the spectators laughed out loud. At one point Miss Benn's nine-year-old nephew offered a piece of commentary on Rosie's bowling technique. Speaking in a loud clear voice, he said, 'She doesn't know about the bias.' *Right, you little brute*, Delia whispered. *You're getting the complete works of Shakespeare for your birthday. From the bargain bookshop.*

Some people bring out the worst in us. Let me be discreet, and speak in the old-fashioned Russian manner. Not far from the city of B----- there lives a man called Mr X who tries to make people feel inadequate in every circumstance. Here's the way he works. You tell him that you spent part of the summer in Australia. 'Where exactly in Australia were you?' he asks. Adelaide, Melbourne, and Sydney, you reply. 'Were you in Perth?' he demands urgently. No, you answer. 'Aaahhh,' he says in a tone of joyless satisfaction. 'You weren't in Perth.' Then he walks away. Now, then. Question one. Why have I never become a celebrated axe murderer? Because Mr X always contrives to address me at a time when I'm not holding a hatchet in my hand. Question two. Why does Mr X make it his business to put other people down? Because there is no area of life in which he himself has ever managed to rise up.

Mr X is not unique. He is the intellectual cousin of certain reviewers. Prof. Statler and Dr Waldorf, for example, are happy to rebuke an author whose work they are not competent to judge. A long time ago I translated parts I and II of an old German book called *De Organographia* for Oxford University Press. Let me be discreet. One gentleman whom we shall call Mr Y agreed to review my linguistic opus, although by his own confession he was not a linguist. Three other persons who were not linguists followed his example. You can be torn for your bad verses on the Komodo Island of Musicology, where the monoglot cobbler strays from his last, and where literate authors are not always judged by their peers. Say you translate Horace's *Odes* and Homer's *Odyssey*. Will all your reviewers be expert in Latin and Greek? Yes: but Komodo Island is different.

Mark my tale. I translated an early treatise on musical instruments. Along with genial reviews from competent scholars, I got caustic soda from four gentlemen

to whom the world of language and literature was *terra incognita*. These gentlemen hadn't a clue what to say, so they made a number of nasty negative noises. 'Cluck, cluck, cluck,' cried the poor little creatures. 'Cluck, cluck, cluck.' They reminded me of a legendary tone-deaf journalist who once stood in for her friend the music critic. Having attended *Le Nozze di Figaro*, she complained about the programme notes. Do I need to add that her review went out under the music critic's name? That sort of thing happens, as we saw in chapter 12.

And now *caveant laici* (= let lay persons beware), because my jolly reflections are prelusive to a serious warning. *THE LORD SHALL COUNT* is really a literary book about number in Scripture. I don't want to overload the book with music. Chapters 14, 15, 16, and 17 constitute a brief introduction to the music of ancient Israel. Competent persons who work their way diligently through the four musical chapters will be able to involve themselves at once in a project which is far too big for one man. Here are two questions. Does Song of Solomon 1. 4 encode an ingenious canon? Or is Psalm 119 the *Spem in alium* of its own day?

More than one reader may be able to answer both questions before long. It has been my job merely to open the musical door. So let no one rebuke me for failing to provide a transcription of the whole Psalter. And let no archaeomusicologist rebuke me for failing to write a book about 'ancient musical theory', because such a unified thing never existed. Years ago I discussed with my editor at OUP the possibility of translating into English *Die Harmonikale Symbolik des Altherthums*, by Albert Freiherr von Thimus. Each of us came separately to realize that the 'likely readership' (= serious musicologists plus erudite occultist weirdoes) would not be big enough to make commercial sense. In recent days I have thanked God several times that the project never got off the ground. It would have kept me from working at the Bible.

People need to be careful. You recall how in the *Mahabharata* Bhima killed an elephant called Ashwathama, and then announced that Drona's son Ashwathama was dead. When I tell my musical friends that Nellie's microphone is preserved in an Oxford museum, they assume that I'm talking about Nellie Melba, and not about Nellie the Elephant. Furthermore, when I write the phrase *Oxford, 1986* in connection with a certain book, my readers assume that I'm talking about Oxford University Press. An author – figure it out on your own – should never employ such a phrase in connection with a book which he has published himself.

People need to be careful. One scholar's bibliography may include a book which he himself has not read. (That's fair game, a careerist will say.) The same scholar's bibliography may include a book which he himself is actually unable to read. (Is that fair game as well?) I wonder. How many musicologists CAN read *Die Harmonikale Symbolik des Altherthums* – the German, the Latin, the Greek, the Hebrew, the Chinese, the lot? Get real! Don't live in a house of straw. You may have filed some very impressive notches on the pistol of your bibliography. Those notches won't help you to match the ranger with a big iron on his hip.

People need to be careful. A well-known model once allowed herself to be photographed in a white tutu. 'She doesn't even know how to *stand*,' said a real ballerina. A well-known singer once allowed himself to be photographed on horseback. 'He doesn't even know how to *sit*,' said a real horseman.

If you're a scholar, whom do you follow? Phil Crosby, or Felix Krull?

Let me ask my next question in the spirit of Benjamin Disraeli. Was musical man created to be a thinker of theoretical thoughts, or a doer of resonant deeds? Gentle reader, I am on the side of the doers. Of course I mean to keep working at the music of the Old Testament, but I'll do my work better if I have companions. And when other people see things that I haven't been able to see, I shall rejoice.

The useless cowards of Succoth and Penuel did their best to stop Gideon from advancing. Afterwards Gideon scourged the men of Succoth, and demolished the tower of Penuel. If Succoth can be punished, so can Komodo Island. What about Penuel? Well, those who study the music of antiquity must give the Bible its place. Archaeomusicology without the Bible is like the history of music without J S Bach. Last night in a dream I heard a stern Mr Wolf talking to the little pigs of archaeomusicology. 'I have come here to represent the Biblical authors,' said Mr Wolf. 'If you won't let me in, I shall blow your house down.'

In a moment we'll move on to look at three pieces of music, two harmonic schemes, and a number of definitions. I want the three compositions to stand on their own *as music*, so I haven't written a lot of programme notes for anyone to complain about. At the end of chapter 17, I'll print the music of Psalm 150.

WAKING UP IN BABYLON: FIRST MORNING IN AN ALIEN LAND

Statler and Waldorf have asked to see another gematrically centred poem. Look at the Hebrew text of Psalm 137, whose 317 letters comprise a 3-letter centre (יתד) and two 157-letter wings. In 400 gematria 317 is the value of השבי (= the captivity), 157 is the value of זקים (= fetters), and 414, the value of יתד, is double the value of either אור (= light) or בהקיץ (= when I awake: see Psalm 17. 15).

Diligent readers who explore the Biblical subtext may construe gematric centres of 882 and 1282 respectively as doublings of phrases like עשי-היום (= moths of the day: *butterflies*) and שופר-הים (= trumpet of the sea: *conch*). In time people will stop asking why the Bible makes no mention of this or that particular thing. If Hamlet had been talking to Brown, Driver, and Briggs, he would have said, 'There are more things in heaven and earth than are dreamed of in your lexicography.'

Oh, dear! Having never written any poetry of their own, Statler and Waldorf find it hard to conceive of a poetic ornithomorph, even though each of them owns a set of Flying Ducks. To help their understanding, I'll do two things. First I'll translate Lewis Carroll's 'Twinkle, twinkle, little bat' into Latin. Then I'll set out my translation at the bottom of the page in the manner of Guillaume Apollinaire.

Beauty is bought by judgment of the eye. A Hebrew psalmist used neither rhyme nor regular metre, but he took care to unify his composition by giving it a shape.

```

                V                               E
              S P                               E R
            T I L           I O           M I C
          A S D E           M I R O
        R Q U I D F A C I A S   S A E C
      U L U M                               S U P E
    R V O L A S I C F I S M A G I   S C A E
  L I C A V E                               S P E R T I
R O R           M I           C A           S D           E M I
A           Q                               U           I D F
A           C                               I           S

```

Shoshannim in Psalm 45 represents the Hebrew word shin-shin-nun-yodh-mem (the antepenultimate character stands for a double letter). We transcribe the word ששנים musically as a six-note phrase: three-beat *c'*, three-beat *c'*, two-beat *c'*, two-beat *c'*, two-beat *f*, two-beat *b*. The six notes of the phrase are transposed down a fourth, and have their time-values varied so as to let them constitute a kind of ground bass. Above the instrumental bass, a melody sung at female pitch is doubled at the lower sixth (see page 335). Once the ground bass has been played six times, it returns to its 'tonic' first note.

The first system of musical notation consists of three staves. The top two staves are in treble clef, and the bottom staff is in bass clef. The music is written in a 6/8 time signature. The melody in the upper staves consists of six notes, each with a dotted half note value. The ground bass in the bottom staff consists of six notes, each with a dotted half note value, transposed down a fourth from the upper melody.

The second system of musical notation consists of three staves. The top two staves are in treble clef, and the bottom staff is in bass clef. The music is written in a 6/8 time signature. The melody in the upper staves consists of six notes, each with a dotted half note value. The ground bass in the bottom staff consists of six notes, each with a dotted half note value, transposed down a fourth from the upper melody.

The third system of musical notation consists of three staves. The top two staves are in treble clef, and the bottom staff is in bass clef. The music is written in a 6/8 time signature. The melody in the upper staves consists of six notes, each with a dotted half note value. The ground bass in the bottom staff consists of six notes, each with a dotted half note value, transposed down a fourth from the upper melody.

The fourth system of musical notation consists of three staves. The top two staves are in treble clef, and the bottom staff is in bass clef. The music is written in a 6/8 time signature. The melody in the upper staves consists of six notes, each with a dotted half note value. The ground bass in the bottom staff consists of six notes, each with a dotted half note value, transposed down a fourth from the upper melody.

In the Shiggaion of Psalm 7 the fourteen notes represented by the Hebrew words kaph-tzaddi-daleth-qoph-wau wau-aleph-zayin-mem-res-h-he shin-mem (the antepenultimate character of the second word stands for a double letter) have their time-values varied so as to let them constitute a kind of ground bass. Above the instrumental bass, a melody sung at female pitch is doubled at the lower third. The ground bass is played seven times. It runs *G* to *B*, *B* to *d*, *d* to *f*, *F* to *A*, *A* to *c*, *c* to *e*, and *e* to *g*. You'll find more information about Psalm 7 in chapter 14. Is שגיון (= Shiggaion) the real root of *chaconne*? I don't know.

7

13

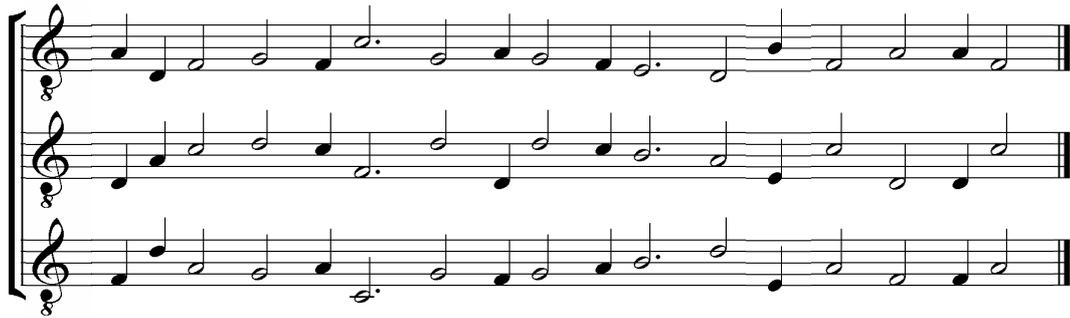
19

31

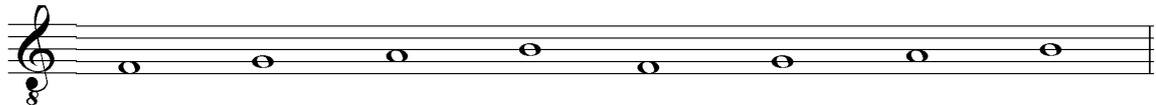
37

42

The Hebrew text of Psalm 117 contains sixty-two letters, and the complete melody of the psalm contains sixty-two beats. You can find the melody in the first letters of consecutive words. There are thirty-seven syllables of text, so you need two complete runs of the seventeen-word text, plus the first three words of verse 1. The transcription of Psalm 117 which follows involves two systems. If you want to sing the psalm in Hebrew, set verse 1's seventeen syllables to the music of the first system, and verse 2's twenty syllables to the music of the second system. The first, second and third lines of each system represent respectively the melodic, Alamoith, and Sheminith parts.



An effect of special harmonic luxuriance is created when a *Shalishim* part is added to the three-part organum of melody, Alamoith, and Sheminith. The *Shalishim* scale (= 'scale of thirds') runs *f g a b f g a b*.



It accompanies the first four notes of the melodic scale at the *upper* third, and the last four notes of the melodic scale at the *lower* third. Here is a single staff on which all four scales are displayed. Notes of the melodic scale, the Alamoith scale, the Sheminith scale, and the *Shalishim* scale are represented respectively by 1s, 2s, 3s, and 4s.

| | | | | | | | | |
|------|---|-----|-----|-----|-----|-----|-----|---|
| T | | | | | | | | |
| R | | | | | | | | |
| E | | | | | | | | |
| B | 3 | | | 2 | | | | 1 |
| L | | | 2 | | | | | 1 |
| E | | 2&3 | | | 4 | | 1 | 4 |
| C | 2 | | 3&4 | | | 1 | | 4 |
| L | | 4 | | 1&3 | | 4 | | 2 |
| E | 4 | | 1 | | 3&4 | | 2 | |
| F | | 1 | | | | 2&3 | | |
| 8ve | 1 | | | | 2 | | | 3 |
| down | | | | | | | -3- | |

The number 1495 is the total value of the 400 gematric alphabet. Now see if you can make sense of two equations. First, $[729 + 648 + 576 + 512] = 2465$. Secondly, $[2465 \times 2] + 1495 = 6425$. **All four notes of the Shalishim scale can be produced by a three-holed pipe.** ‘Shalishim’ (שלשים) reminds me of the Russian word тройка, which can mean both *three of a kind* and *three-horse carriage*. The ‘instruments of musick’ played by the women of I Samuel 18. 6 (*shalishim*: shin-lamedh-shin-yodh-mem) may well have been three-holed four-note pipes. See what happens when you add a Shalishim part to the score of Psalm 117. Make sure to place your four groups of performers in four different corners of the room.

We can use the English word *MASSIVE* to denote David’s four-part harmony of melodic, Alamoth, Sheminith, and Shalishim notes. A different form of four-part harmony called ‘Gittith’ was devised by David during the time which he spent in Gath. The four scales of the Gittith system are displayed on the single staff that follows. Notes of the melodic scale are represented by 1s. When you’re using Gittith harmony, as for example in Psalm 81, make sure to place your four groups of performers in four different corners of the room.

| | | | | | | | | | | |
|------|-------|---|-----|---|---|---|---|-----|---|--|
| T | | | | | | | | | | |
| R | ----- | | | | | | | | | |
| E | | 4 | | | | 2 | | | | |
| B | 4 | | | 4 | 2 | | | | 1 | |
| L | | 3 | 4 | | | | | 1 | | |
| E | 3 | | | 3 | | 1 | | | | |
| C | | 2 | 3 | | 1 | | | | 2 | |
| L | 2 | | | 1 | | 3 | 2 | | | |
| E | | | 1 | | 3 | | | | 3 | |
| F | | 1 | | | | 4 | 3 | | | |
| 8ve | 1 | | | 2 | 4 | | | | 4 | |
| down | | | -2- | | | | | -4- | | |

You may like to familiarize yourself with Psalms 45 and 7 by performing them on violin, viola and cello, or on three different recorders. It’s a good idea not to write an English text for the top two parts of these psalms until you know the music really well.

Enough! Let me mention a number of technical terms, and then prophesy.

To lift up the horn in I Chronicles 25. 5 means ‘to perform from musical notation’.

The word *Higgaion* is derived from the root he-gimel-he (= murmur), and means, ‘Accompany the tune at the third below.’

The rhyming word *Shiggaion* is derived from the root shin-gimel-he (= wander), and means, ‘Accompany the tune at the third below, while allowing the ground bass to engage in transpositional wandering.’

The word *Shigionoth* (see Habakkuk 3. 1) denotes a four-part Shiggaion in which the ground bass is played upon two wandering or not-in-parallel Sheminith parts.

The sons of Korah are players of bowed instruments, as we'll see in chapter 19.

The *songs of the degrees* are all three-part organa (melody, Alamothe, and Sheminith), apart from Psalm 121, which is a two-part Alamothe setting, and Psalm 127, which is a two-part Sheminith setting. In Psalms 122, 124, 131, and 133, שיר המעלות לדוד (= A song of the degrees of David) adds up in 400 gematria to 1105 = Alamothe 512 *b* + Sheminith 512 *b* + the notation-number 81. In Psalms 120, 123, 125, 126, 128, 129, 130, 132, and 134, שיר המעלות (= A Song of the degrees) adds up in 400 + 22 gematria to 1061 + 125 = 1186 = Alamothe 593 + Sheminith 593. In Psalm 121, שיר למעלות (= A song FOR the degrees – don't ignore the preficial lamedh) adds up in 400 gematria to 1086 = Alamothe 729 *f* + the notation-number 357. In Psalm 127, the first and third words of the three-word title שיר המעלות לשלמה (= A song of the degrees for Solomon) add up in 400 gematria to 915, the 400 gematric value of על-השמינית (= on the Sheminith).

What does the word *Selah* mean? I must declare a notable debt here. J. Taylor ['Selah' article, *Hastings' Dictionary of the Bible* (Edinburgh, 1904)] mentions the possibility that Selah may be an acrostic, with samekh-lamedh-he standing for samekh-beth lamedh-mem-ayin-lamedh-he he-shin-resh, and signifying what musicians call *da capo* (= 'Go back to the start of the song'). I believe that 'Selah' is indeed an acrostic, but with samekh-lamedh-he standing for samekh-beth lamedh-mem-ayin-lamedh-he he-PE-HE, and signifying, 'Go back to the start of the SENTENCE'. In 400 gematria the formula which I suggest transcribes as follows.

$$[60 + 2] + [30 + 40 + 70 + 30 + 5] + [5 + 80 + 5] = 327$$

Look at the three letters of the acrostic. THREE letters standing for THREE words may hint at the use of THREE different numerical alphabets. What happens when we add up the word 'Selah' in 400, 22, and 406 gematria?

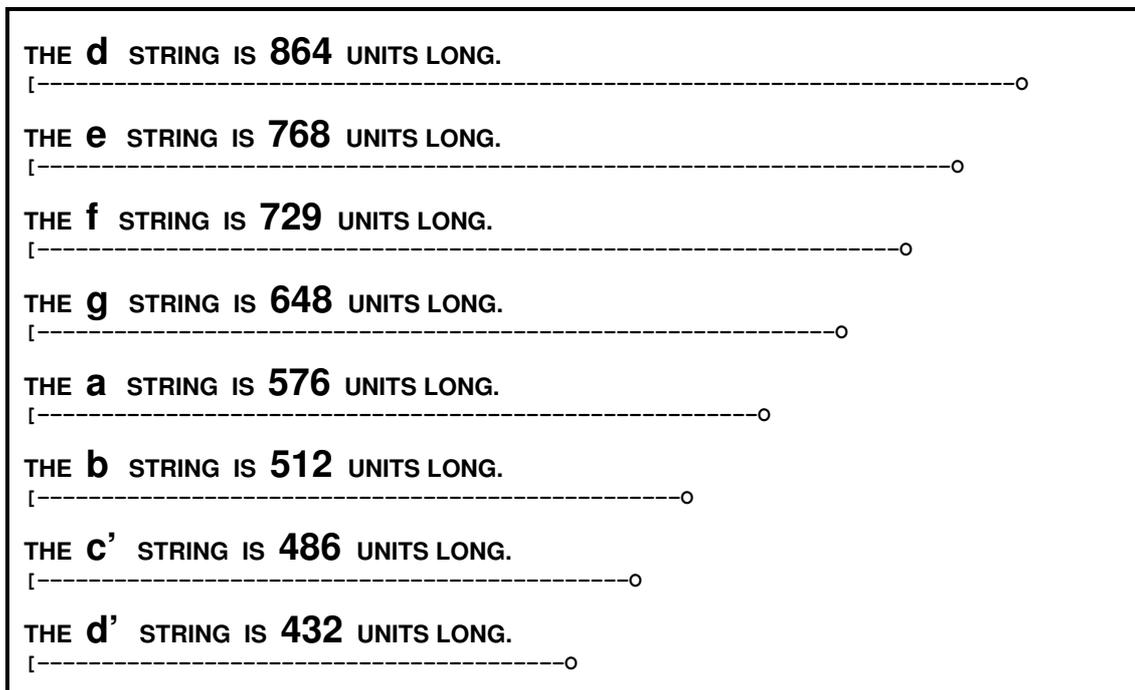
(In '406 gematria', as we'll learn when we come to chapter 19, the Hebrew letter-names are SPILLED OUT and added up in terms of 400 gematria, so that *samekh-lamedh-he*, for example, becomes samekh-mem-kaph lamedh-mem-daleth he-aleph = [60 + 40 + 20] + [30 + 40 + 4] + [5 + 1] = 200.)

| | | | | |
|-----------------------------------|---|----------------|---|-----|
| In 400 gematria, samekh-lamedh-he | = | [60 + 30 + 5] | = | 95 |
| In 22 gematria, samekh-lamedh-he | = | [15 + 12 + 5] | = | 32 |
| In 406 gematria, samekh-lamedh-he | = | [120 + 74 + 6] | = | 200 |
| 95 + 32 + 200 = 327 | | | | |

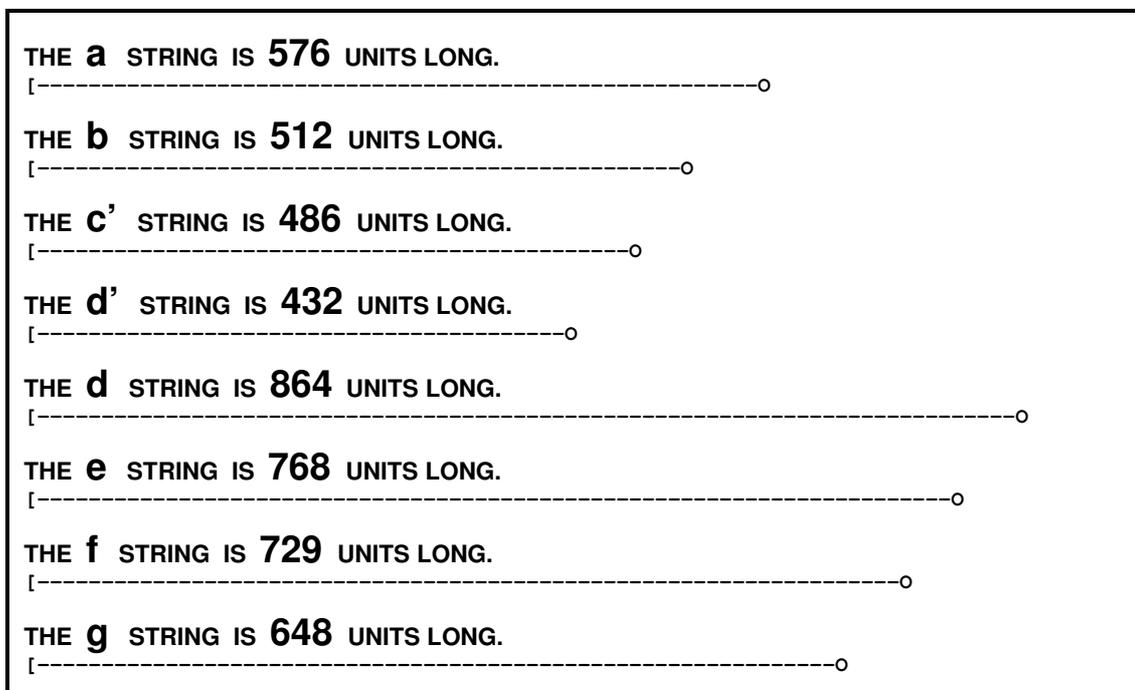
When the three initials of the acrostic are spelled out in three different numerical alphabets, they add up to the 400 gematric total of the three-word instruction samekh-beth lamedh-mem-ayin-lamedh-he he-pe-he. *Selah* means, 'Sing the foregoing sentence for a second time.'

Now for a prophecy. Davidic musical artefacts may be dug up some day. Will archaeologists discover seven instruments that were once strung, with wire of uniform thickness, in accordance with the diagrams of pages 375-378? Will they unearth the draw-plate that hides in Song of Solomon 1. 4a? Will they find instruments whose bodies bear the domino-brands of page 357? And if they do, will some clown declare that nothing has been established for certain? I wonder.

Here we go. In the Davidic melody-plus-Alamoth-plus-Sheminith-plus-Shalishim system, the melodic scale is played on an instrument having unitary string-lengths as follows.

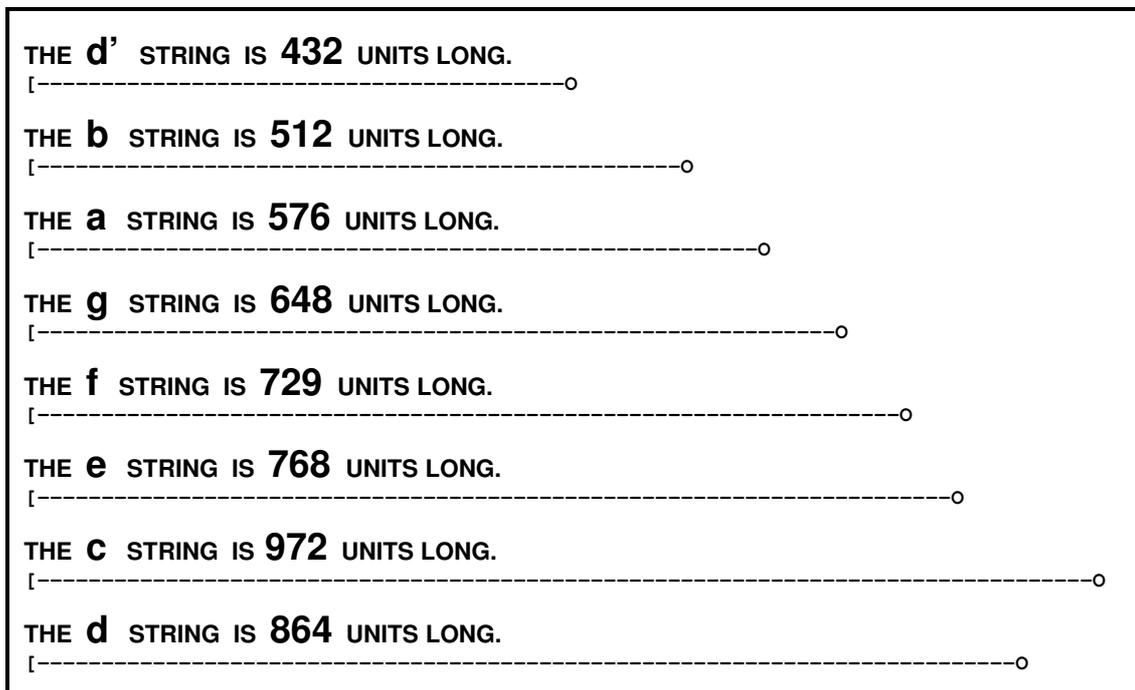


In the Davidic melody-plus-Alamoth-plus-Sheminith-plus-Shalishim system, the Alamoth scale is played on an instrument having unitary string-lengths as follows.

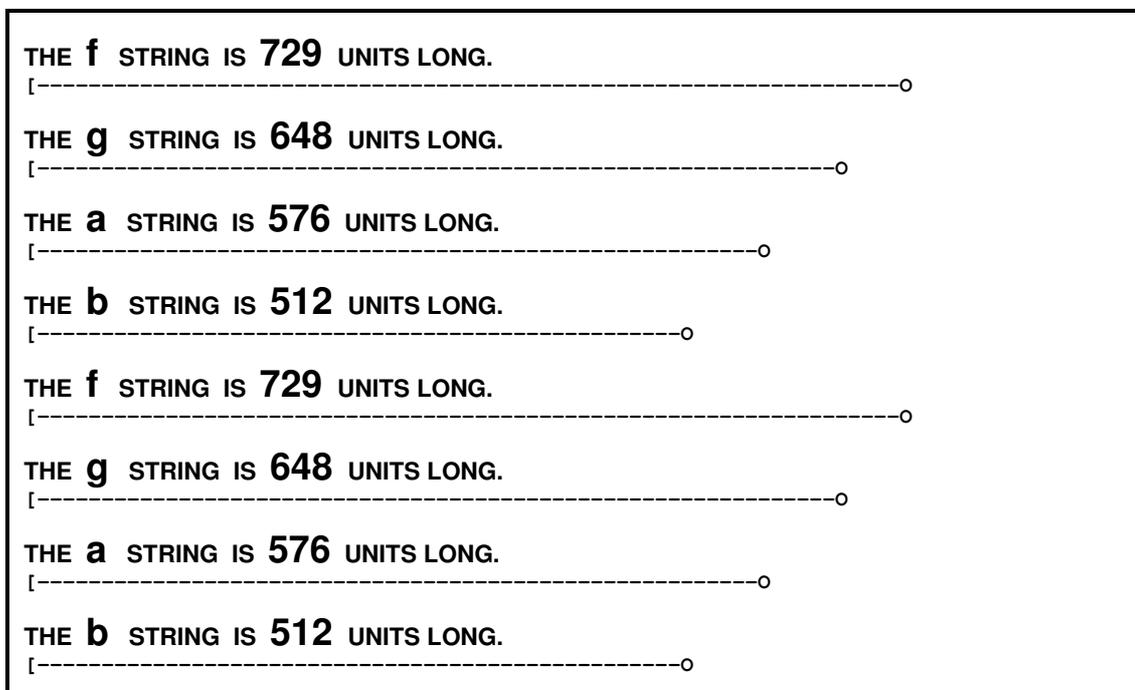


A Higgsaion instrument would have had eight pairs of strings tuned *B-d, C-e, d-f, e-g, f-a, g-b, a-c', b-d'*. There may even have been a special Shiggsaion instrument having sixteen Higgsaion strings and two octaves or so of bass strings.

In the Davidic melody-plus-Alamoth-plus-Sheminith-plus-Shalishim system, the Sheminith scale is played on an instrument having unitary string-lengths as follows.

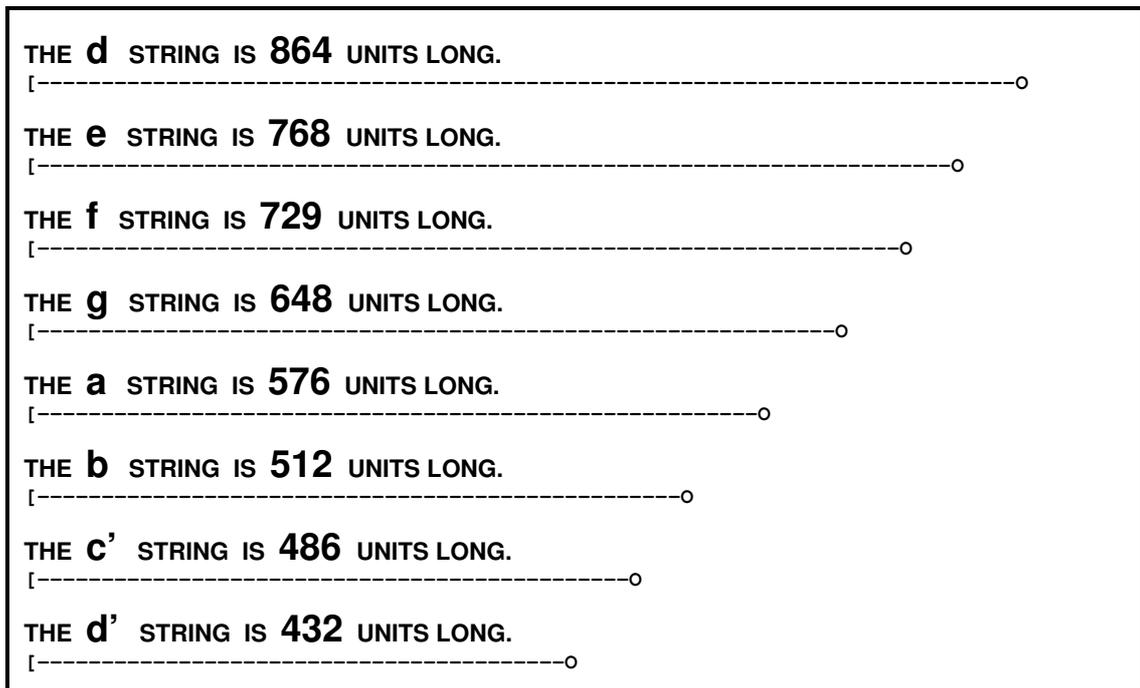


In the Davidic melody-plus-Alamoth-plus-Sheminith-plus-Shalishim system, the Shalishim scale is played on an instrument having unitary string-lengths as follows.

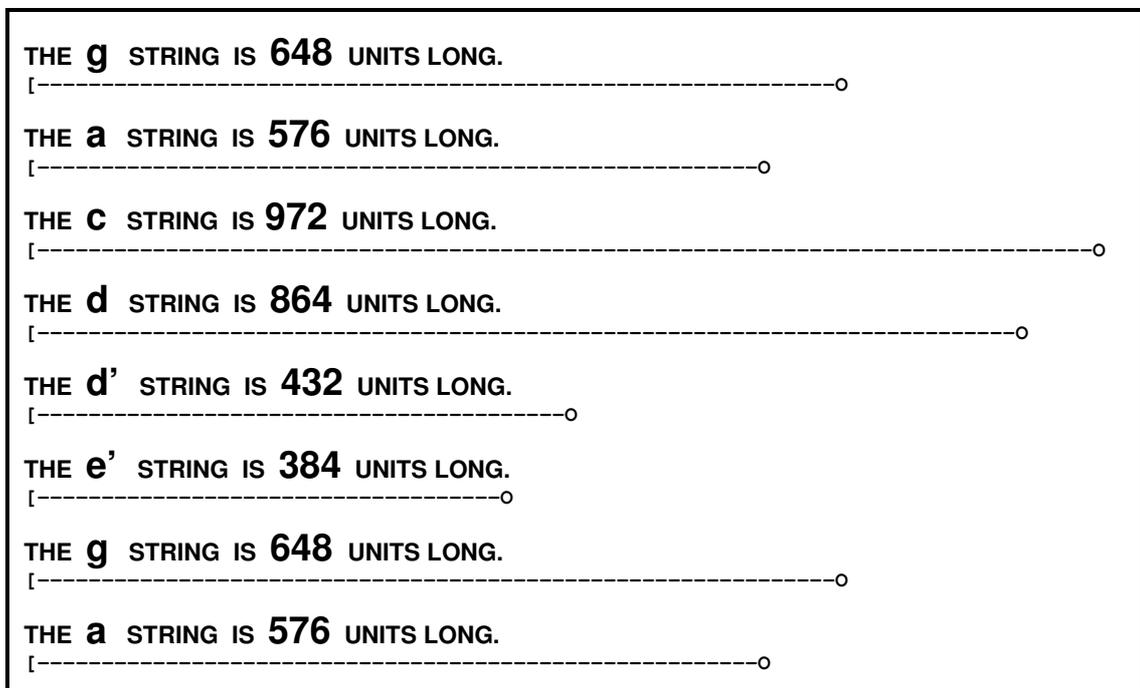


Do you need eight strings on a four-note instrument? Yes. Once you learn to play Davidic notation on an eight-string instrument, you can play all seven of the eight-string Davidic instruments. A four-string instrument would require a separate technique.

In the Davidic Gittith system, the first or melodic scale is played on an instrument having unitary string-lengths as follows.



In the Davidic Gittith system, the second scale is played on an instrument having unitary string-lengths as follows.



At the least a Shoshannim instrument would have had eight pairs of strings tuned *F-d*, *G-e*, *A-f*, *B-g*, *C-a*, *d-b*, *e-c'*, and *f-d'*. There may even have been a special instrument having sixteen Shoshannim strings and two octaves or so of bass strings. On such a Shoshannim instrument, as on the Shiggaion instrument, the melodic and bass strings may have run in different directions, as they do on the so-called 'Bohemian wing'.

In the Davidic Gittith system, the third scale is played on an instrument having unitary string-lengths as follows.

| | |
|--|---------|
| THE b STRING IS 512 UNITS LONG. | [-----○ |
| THE c' STRING IS 486 UNITS LONG. | [-----○ |
| THE a STRING IS 576 UNITS LONG. | [-----○ |
| THE b STRING IS 512 UNITS LONG. | [-----○ |
| THE f STRING IS 729 UNITS LONG. | [-----○ |
| THE g STRING IS 648 UNITS LONG. | [-----○ |
| THE e STRING IS 768 UNITS LONG. | [-----○ |
| THE f STRING IS 729 UNITS LONG. | [-----○ |

In the Davidic Gittith system, the fourth scale is played on an instrument having unitary string-lengths as follows.

| | |
|--|---------|
| THE d' STRING IS 432 UNITS LONG. | [-----○ |
| THE e' STRING IS 384 UNITS LONG. | [-----○ |
| THE c' STRING IS 486 UNITS LONG. | [-----○ |
| THE d' STRING IS 432 UNITS LONG. | [-----○ |
| THE d STRING IS 864 UNITS LONG. | [-----○ |
| THE e STRING IS 768 UNITS LONG. | [-----○ |
| THE c STRING IS 972 UNITS LONG. | [-----○ |
| THE d STRING IS 864 UNITS LONG. | [-----○ |

Musical readers who are prepared to study the Hebrew Bible for themselves will be able to test every statement that appears in chapter 17. These readers will also be able to create a full score of Psalm 150, using the materials which follow. The melody employs the first letters of consecutive words, then the last letters, and then the first letters once again (ending on the tau of tau-he-lamedh-lamedh).

THE HARMONICAL SCORING OF PSALM 150

| | | |
|-----|---------------------|---|
| 1. | הללו יה | part 1 of verse 1: 86 in 400 gematria, 50 in 22 gematria |
| 2. | הללו אל בקדשו | part 2 of verse 1: 514 in 400 gematria, 100 in 22 gematria |
| 3. | הללוהו ברקיע עזו | part 3 of verse 1: 547 in 400 gematria, 142 in 22 gematria |
| 4. | הללוהו בגבורתיו | part 1 of verse 2: 711 in 400 gematria, 117 in 22 gematria |
| 5. | הללוהו כרב גדלו | part 2 of verse 2: 347 in 400 gematria, 104 in 22 gematria |
| 6. | הללוהו בתקע שופר | part 1 of verse 3: 1240 in 400 gematria, 169 in 22 gematria |
| 7. | הללוהו בנבל וכנור | part 2 of verse 3: 448 in 400 gematria, 133 in 22 gematria |
| 8. | הללוהו בתף ומחול | part 1 of verse 4: 654 in 400 gematria, 132 in 22 gematria |
| 9. | הללוהו במנים ועגב | part 2 of verse 4: 305 in 400 gematria, 125 in 22 gematria |
| 10. | הללוהו בצלצלי שמע | part 1 of verse 5: 744 in 400 gematria, 168 in 22 gematria |
| 11. | הללוהו בצלצלי תרועה | part 2 of verse 5: 1015 in 400 gematria, 187 in 22 gematria |
| 12. | כל הנשמה תהלל יה | part 1 of verse 6: 930 in 400 gematria, 147 in 22 gematria |
| 13. | הללו יה | part 2 of verse 6: 86 in 400 gematria, 50 in 22 gematria |

1. **86 = 2 x 43, and 243 = 9 x 3³, and 933 = melodic d: all sing the melody.**
2. **514 – 100 = 6 x 69, and 669 = Sheminith a: melody plus Sheminith.**
3. **547 + 142 = 43 (400 gematric value of גמ = also: see next page) + 646 = על עלמות (= upon Alamothe): ADD Alamothe to the foregoing melody-plus-Sheminith harmony.**
4. **711 – 117 = 66 x 9, and 669 = Sheminith a: melody plus Sheminith.**
5. **347 – 104 = 9 x 3³, and 933 = melodic d: all sing the melody.**
6. **1240 = [646 = על עלמות (= upon Alamothe)] + [66 x 9], and 669 = Sheminith a: melody plus Alamothe plus Sheminith.**
7. **133 = 19 x 7, and 197 + 448 = 645 = Alamothe a: melody plus Alamothe.**
8. **654 = 327 x 2, and [32 x 72] = melodic 711 a + Alamothe 864 d + Sheminith 729 f: melody plus Alamothe plus Sheminith.**
9. **305 – 125 = 12 x 15, and 1215 = melodic 729 f + Alamothe 486 c': melody plus Alamothe.**
10. **168 = 4 x 42, and 442 + 744 = Alamothe 593 b + Sheminith 593 b: melody plus Alamothe plus Sheminith.**
11. **1015 = = 43 (400 gematric value of גמ = also) + 972 (400 gematric value of תופפות = drummer-girls: see Psalm 68. 26 = AV, verse 25): last two words בצלצלי תרועה = 933 = melodic d: ADD drums to the foregoing three-part harmony for the first word הללוהו, then all sing the melody for the last two words.**
12. **930 = 2 x 465, and 2465 = 729 f + 648 g + 576 a + 512 b, the four notes of the Shalishim scale: ALL IN: melody plus Alamothe plus Sheminith plus Shalishim.**
13. **86 = 2 x 43, and 243 = 9 x 3³, and 933 = melodic d: all sing the melody.**



ha le lu yah ha le lu el be kodh sho ha le lu hu bir ki a uz



zo ha le lu hu bigh vu ro thayw ha le lu hu che rov gudh lo ha



le lu hu be the ka sho far ha le lu hu be ne vel we chinnor ha



le lu hu be thof u ma chol ha le lu hu be minnim we u gav



ha le lu hu be tsil tse le sha ma ha le lu hu be tsil tse le the



ru ah kol han ne sha mah te hal lel yah ha le lu yah

We know one thing about Harbonah, the composer of Psalm 150: he wasn't afraid to use the court-speak word גמ (see Esther 7. 9). Psalm 150's gematric centre comprises the three letters כנו, which in 400 gematria add up to 76, or to double 38. What does the number 38 represent in 400 gematria? The mourning (האבל) of the Jews, which is described in Esther 4. 3 (see Job 30. 31). By contrast, in 400 gematria each 82-letter wing of the psalm stands for the formula הללוהו (= praise him), which appears nine times in Psalm 150. It is possible that the psalm's 167 letters connote Esther, whose book contains 167 verses. Letters 99, 25, 24, 31, 85, and 7 of Psalm 150 are respectively cheth, resh, beth, wau, nun, and he. The numbers 99, 25, 24, 31, 85, and 7 add up to 271. In 400 gematria Harbonah's name חרבונה (cheth-resh-beth-wau-nun-he) adds up to 271. Harbonah's notated name contains three one-beat notes which help to build the melody. At times the very short Hebrew E-vowel is set to notes of two and three beats. Don't let that fact worry you! In the Septuagint, the very short E of הללויה (HALLeLU-YAH) is represented by η, the long vowel eta (αλληλουια). For the pronunciation of the psalm-text, see page 380. Note that once the first two verses have been sung *a capella*, instruments should enter in the verses which mention them. At the least Harbonah's shofar played *e* and *b* (see line 3): but Davidic shofars may have been cornetts, with fingerholes.

CHAPTER 18: SEE HOW LARGE A LETTER I HAVE WRITTEN

Ch'fut l'Otchupâtion tchi tuit la langue (= It was the Occupation that killed the [Auregnais] language [of which the cited sentence is a specimen]).

वैं देसे क्वैं जात्रा। (= In the land of lunatics, you find mad rituals).

Nepalese proverb

(Today I got back from Rome, where the heat was fierce. No more music for a while! Four days ago, in the Pontifical Gregorian University, I presented a paper on the music of Jonah. At the end of the session my listeners created a tiny piece of musical history by performing two of the prophet's own melodies.)

Let us begin. Why do so many people make life hard for themselves?

Why do they type in a font (12 point Times New Roman unbold) whose small and emaciated characters are nearly all cluttered with useless serifs?

Why do they type in a font (12 point Times New Roman unbold) whose small and emaciated characters are nearly all cluttered with useless serifs?

Whether or not that font is tolerable on a page, it is HOPELESS for a screen.

Let us have done with 12 point Times New Roman unbold, and with the superstition that serifs help the reader's eye to move along a line of printed text. For email writing we should use 12 point Arial bold (the font that I'm using at the moment) as our normal script. The only weakness of Arial is that its upper-case i is indistinguishable from its lower-case ell.

Illustration II Corinthians II Trovatore

Now let me talk about Hebrew. The black-letter script which is used in Hebrew Bibles needs to be DUMPED. Should we tolerate the folly of an alphabet whose letters are difficult to distinguish from each other? No! Should we permit font-makers to go about their work in a spirit of malevolent ambiguity? No! Let us refuse to read any Hebrew Bible which contains pairs of near-identical twins like beth and kaph, gimel and nun, dalet and resh, wau and zayin, final mem and samekh. I have often encountered vicious pairs of twins whose forms are much less distinct than the ones that you see below.

ס ם ן ז ד ר ג נ כ כ

Why do we put up with the hieratic perversity of thick and thin pen-strokes?

א ב ג ד ה ו ז ח ט י כ ך ל מ ם נ ן ס ע פ ף צ ץ ק ר ש ת

The Hebrew Bible should be printed in 18 point Tahoma unbold.

א ב ג ד ה ו ז ח ט י כ ך ל מ ם נ ן ס ע פ ף צ ץ ק ר ש ת

Something else. Don't ask me why, but the people who added vowels to the Hebrew text have saddled us with two pieces of COMPLETE LUNACY.

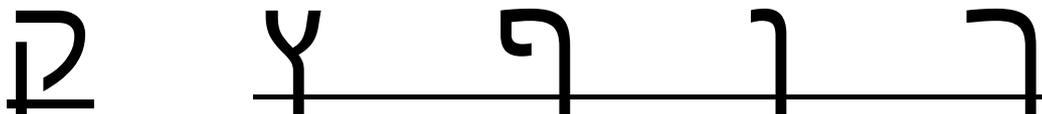
The first is a symbol which looks like an English colon. It can represent either a very short E or silence, and you have to learn a set of rules before you know what it denotes in a particular circumstance. (Do the rules always apply? No.)

The second is a symbol which looks like a tiny capital T. It can represent either a long A or a short O, and you have to learn another set of rules before you know what *it* denotes in a particular circumstance.

In the first case we should print the colon-thing in a tiny rectangular box whenever it denotes silence. Then everyone will understand that an unboxed colon is always a very short E.

In the second case we should surround the tiny T-thing with a circle whenever it denotes a short O. Then everyone will understand that an unencircled T is always a long A.

One last thing about Hebrew. The final forms of the letters kaph, nun, pe, and tzaddi descend a little below the line. So to a small degree does the letter qoph.



(I've felt obliged to use black-letter Hebrew script in the exercises which follow, because that's what you're going to meet when you start to read the Bible in Hebrew.)

It remains to say something about Greek.

The Greek alphabet as we have it contains no H. When you want to show the presence of H before a vowel, you write a comma like a tiny C above the lower-case vowel, and before the upper-case vowel. (Initial epsilon is always preceded by an H.)

ά- ε- ή- ί- ό- ύ- ώ- ‘A- ‘E- ‘H- ‘I- ‘O- ‘Υ- ‘Ω-

This comma has no gematric significance, so I've omitted it from most of my Greek quotations in *THE LORD SHALL COUNT*.

When you start to read the Greek New Testament or the Septuagint, you'll notice that every word beginning with an aitchless vowel other than epsilon is furnished with a comma like a tiny C written backward.

ἀ- ἐ- ἥ- ἰ- ὀ- ὠ- ’A- ’E- ’H- ’I- ’O- ’Ω-

This comma is a squalid nuisance. It has no gematric significance, and no useful purpose. Sensible people would be content to use a comma for aitch, and to leave aitchless vowels unmarked. Alas! At times scribes and scholars are no more sensible than the Nerdarchs of the British Computer World, who decree that whenever I'm typing an email message in some foreign language I must be unable to use diacritical marks. Stupidity is ambidextrous. Never be afraid to denounce it. Why do ordinary people find it difficult to change the headlights of their cars? BECAUSE MANUFACTURERS ARE UNBELIEVABLY STUPID.

What were we talking about? Oh, yes. Commas over Greek letters. Each kind of comma is written over the *second* vowel of a diphthong. Another thing that you'll notice when you read any Biblical text in Greek is the large number of accents. Look at Genesis 1. 3 as it appears in the Septuagint.

καὶ εἶπεν ὁ θεός γενηθήτω φῶς καὶ ἐγένετο φῶς

(= And God said, Let there be light: and there was light).

Here you see eleven markings additional to the letters themselves. They include eight accents, and two needless commas. Apart from the comma denoting H which appears over the third word, every one of these markings should be ignored.

The letters gamma, zeta, eta, mu, xi, rho, phi, chi, and psi descend a little below the line. So does the final form of sigma.

γ ζ η μ ξ ρ φ χ ψ ς

Take a bit of advice. Use an ordinary English ess for final sigma, and forget about the descending tail. (I'll print a final sigma in the Greek exercise below, but you don't need to practise it.)

Last thing. Sometimes you find a little iota written immediately below an alpha, or an eta, or an omega, thus:

α η ω
| | |

Such an underwritten iota is not a mere accent, and although it has no sound it should always be given its normal gematric value.

Now we're ready to start writing. The seven pages which follow constitute a tiny copy-book in which both the Hebrew and Greek letters are printed in three different sizes. At the top of each page comes a single line of small letters. Then come two lines of medium-sized letters. After that come the large characters, each of which is assigned a line of its own so that you can practise writing it six or seven times. (You may like to use a broad-nibbed fibre-tip pen for writing the large Hebrew letters.) Copy the large letters first, the medium-sized letters next, and the small letters last of all.

Hark, the doorbell! Archdeacon Blennerhassett Blane has come over to show us his second volume of verse, *The Charcoal Relena*. He has dedicated the book not 'to the memory of a wonderful Albanian lady', as his bishop suggested, but to a recent Miss Albania called Hasna Xhukiçi. That'll teach the bishop to guard his tongue. Young Blane's title has mystified *Gundam*-fans no less than anagram-nerds, and the poet offers a £20 note to the first reader who can explain it. Hark, the doorbell again! Lettuce Girl has come over to learn the Hebrew alphabet, and also to collect her finished portrait. Do you know what? It will please me enormously if some readers take their first steps in Hebrew and Greek by working at the exercises which follow. A few of them may get so occupied with studying the Biblical languages that they will have little time left for gematria. Good for them if they do! Gematria is not the point of everything.

א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת

א ב ג ד ה ו ז ח ט י כ ל

ל מ נ ס ע פ צ ק ר ש ת

א

aleph

ב

beth

ג

gimel

ד

daleth

ה

he

ו

wau

ז

zayin

ח

cheth

ט

teth

אבגדהוזהטיכךלממנוסעפףצץקרשת

אבגדהוזהטיכך

לממנוסעפףצץקרשת

י

yodh

כ

kaph

ך

(final)

ל

lamedh

מ

mem

ם

(final)

נ

nun

ז

(final)

ס

samekh

א בג ד ה ו ז ח ט י כ ך ל מ ם נ ן ס ע פ ף צ ץ ק ר ש ת

א בג ד ה ו ז ח ט י כ ך

ל מ ם נ ן ס ע פ ף צ ץ ק ר ש ת

ע

ayin

פ

pe

ף

(final)

צ

tzaddi

ץ

(final)

ק

qoph

ר

resh

ש

s(h)in

ת

tau

α β γ δ ε ζ η θ ι κ λ μ ν ξ ο π ρ σ ς τ υ φ χ ψ ω

α β γ δ ε ζ η θ ι κ λ μ ν

ξ ο π ρ σ ς τ υ φ χ ψ ω

| | | |
|---|---------|-------|
| α | alpha | _____ |
| β | beta | _____ |
| γ | gamma | _____ |
| δ | delta | _____ |
| ε | epsilon | _____ |
| ζ | zeta | _____ |
| η | eta | _____ |
| θ | theta | _____ |
| ι | iota | _____ |
| κ | kappa | _____ |
| λ | lambda | _____ |
| μ | mu | _____ |

α β γ δ ε ζ η θ ι κ λ μ ν ξ ο π ρ σ ς τ υ φ χ ψ ω

α β γ δ ε ζ η θ ι κ λ μ ν

ξ ο π ρ σ ς τ υ φ χ ψ ω

ν nu _____

ξ xi _____

ο omicron _____

π pi _____

ρ rho _____

σ ς sigma _____

τ tau _____

υ upsilon _____

φ phi _____

χ chi _____

ψ psi _____

ω omega _____

Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω

Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ

Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω

Α alpha

Β beta

Γ gamma

Δ delta

Ε epsilon

Ζ zeta

Η eta

Θ theta

Ι iota

Κ kappa

Λ lambda

Μ mu

Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω

Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ

Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω

| | | |
|----------|---------|-------|
| N | nu | _____ |
| Ξ | xi | _____ |
| Ο | omicron | _____ |
| Π | pi | _____ |
| Ρ | rho | _____ |
| Σ | sigma | _____ |
| Τ | tau | _____ |
| Υ | upsilon | _____ |
| Φ | phi | _____ |
| Χ | chi | _____ |
| Ψ | psi | _____ |
| Ω | omega | _____ |

What you see below is the Hebrew text of Psalm 23. Copy out the psalm, working from right to left. Don't try to do the whole job in one sitting.

מזמור לדוד

יהוה רעי לא אחסר

בנאות דשא ירביצני

על מי מנחות ינהלני

נפשי ישובב

ינחני במעגלי צדק למען שמו

גם כי אלך בגיא צלמות

לא אירא רע

כי אתה עמדי

שבטך ומשענתך המה ינחמני

תערך לפני שלחן נגד צררי

דשנת בשמן ראשי כוסי רוייה

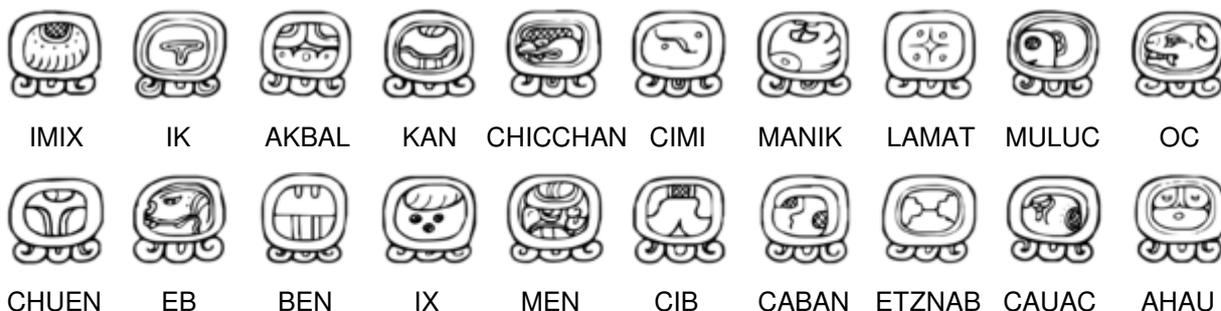
אך טוב וחסד

ירדפוני כל ימי חיי

ושבתי בבית יהוה

לארך ימים

David's phrase לארך ימים (= for the length of days) leads me to append twenty Mayan calendrical glyphs. I'll print day-names in Yucatec below the glyphs.



Much of Mayan religion was abominable, but there is no excuse, in Acts 19. 19 or elsewhere, for the annihilation of Mayan written lore which was perpetrated by European immigrants. You can investigate Mayan chronology in your own time.

Now copy out the Greek text of II John 1-4, working from left to right. There are no capital letters, commas, or tiny underwritten iotas for you to worry about.

ο πρεσβυτερος εκλεκτη κυριαι

και τοις τεκνοις αυτης ους εγω

αγαπω εν αληθειαι και ουκ εγω

μονος αλλα και παντες οι

εγνωκοτες την αληθειαν

δια την αληθειαν την

μενουσαν εν ημιν και μεθ

ημων εσται εις τον αιωνα

εσται μεθ υμων χαρις ελεος

ειρηνη παρα θεου πατρος και

παρα κυριου ιησου χριστου

του υιου του πατρος εν

αληθειαι και αγαπηι εχαρην

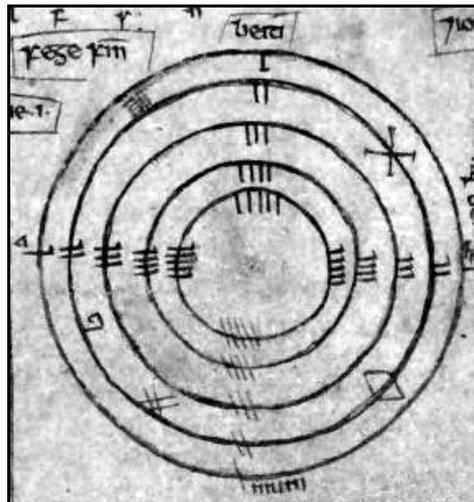
λιαν οτι ευρηκα εκ των τεκνων

σου περιπατουντας εν αληθειαι

καθως εντολην ελαβομεν

παρα του πατρος

Before you stop, go back to 1390 AD, and acquaint yourself with a monument of the 25-letter ogham alphabet. Fionn's Window from *The Book of Ballymote* can be read [12345 + 4 + 21 + 22 + 2324 + 25] so as to yield the 'palindromic mountain prime' 14741, which we'll meet as a partly alphabetical number in chapter 32. 14741 happens to be the 800 Greek gematric value of John 1. 45.



Let me end chapter 18 with two questions. Do you agree that a book printed mostly in 12 point Arial bold is easy to read? And do you agree that every book should be easy to read? Well, then!

Let us get rid of 12 point Times New Roman unbold.

Ich lehre euch den Übermenschen. I teach you the superman.

CHAPTER 19: A RIVER WENT OUT OF EDEN

Uns ist in alten mæren wonders vil geseit
(= Many wonders are told to us in old stories).
The Nibelungenlied

Where Alph, the sacred river, ran
Through caverns measureless to man.....
Samuel Taylor Coleridge, 'Kubla Khan'

The Tiber, hymn'd, when Rome was free,
By many a bard of old,
Hides many a marble F E G
Beneath its sands of gold.
James Smith, 'Alphabetical Rivers'

Once you allow letters to bear numerical meanings, you can freight your written language with a numerical message. In the 800 English gematric alphabet Z is 800, O is 60, and D is 4, so the redoubtable name of ZOD.....



.....adds up to the important musical number 864. (I wonder if he knows.)

You can easily encode a three-digit number in terms of the 800 alphabet. But if you want to encode larger numbers concisely, you need an alphabet whose values are larger.

Should you square the values of the 800 English alphabet?

A = 1, B = 4, C = 9, D = 16, E = 25, F = 36, G = 49, H = 64, I = 81, J = 100, K = 400,

L = 900, M = 1600, N = 2500, O = 3600, P = 4900, Q = 6400, R = 8100, S = 10000,

T = 40000, U = 90000, V = 160000, W = 250000, X = 360000, Y = 490000, Z = 640000

No. If you do so, your last eight alphabetical characters will have values which are too large for common use. I mean to say, your twenty-sixth and twenty-fifth alphabetical characters will have a difference of one hundred and fifty thousand.

$$640000 - 490000 = 150000$$

In the 'squared 800 alphabet', CLAUDIA SCHIFFER adds up to a musical 109359.

$$[9 + 900 + 1 + 90000 + 16 + 81 + 1] = 91008$$

$$[10000 + 9 + 64 + 81 + 36 + 36 + 25 + 8100] = 18351$$

$$91008 + 18351 = 109359$$

Musical? Yes. 109 is the twenty-ninth prime, and 359 is the seventy-second prime. The product of 29 and 72 is 2088, which is the sum of three unitary string-lengths: 864 *d*, 648 *g*, and 576 *a*. (Delia has begun to hum *The Death of Åse*.)

Oh, dear. Seth Prodie and his friends are getting really angry! But there's more.

$$[4900 + 1 + 8100 + 81 + 10000] + [64 + 81 + 900 + 40000 + 3600 + 2500] = 70227$$

When the name of PARIS HILTON is numerated in terms of the 'squared 800 alphabet', it creates a sublime sonic vista (twenty-seven harpers all playing the chord *d f a d'*, giving a total of one hundred and eight concordant notes).

$$27 \times [864 d + 729 f + 576 a + 432 d'] = 70227$$

Beyond these two examples we don't need to go. Although the 'squared 800 alphabet' can occasionally throw up interesting numbers by accident, it isn't much use for mathematical notation.

Well, then. Should you square the values of the 26 English alphabet?

$$A = 1, B = 4, C = 9, D = 16, E = 25, F = 36, G = 49, H = 64, I = 81, J = 100,$$

$$K = 121, L = 144, M = 169, N = 196, O = 225, P = 256, Q = 289, R = 324,$$

$$S = 361, T = 400, U = 441, V = 484, W = 529, X = 576, Y = 625, Z = 676$$

No. If you do so, your largest gematric value will be six hundred and seventy-six, so the 'squared 26 alphabet' will do little for you that the 800 English alphabet does not already do.

Here's one example of the 'squared 26 alphabet' in action. The names of CLAUDIA SCHIFFER and PARIS HILTON combine to give an overall total of 3762.

$$[9 + 144 + 1 + 441 + 16 + 81 + 1] + [361 + 9 + 64 + 81 + 36 + 36 + 25 + 324] = 1629$$

$$[256 + 1 + 324 + 81 + 361] + [64 + 81 + 144 + 400 + 225 + 196] = 2133$$

$$1629 + 2133 = 3762$$

There is nothing frivolous about the name of a real human being. Every person's name either will or will not be written in the Lamb's book of life. Those who are aware of this solemn fact will be unsurprised to see that number can turn levity into gravity. Whenever I come across the number 3762, I recall that the Hebrew text of Psalm 117 contains thirty-seven syllables and sixty-two characters.

It may interest you to know that in 400 Hebrew gematria the whole psalm-text adds up to 2294, which is the product of thirty-seven and sixty-two. Furthermore, the complete melody is sixty-two beats long (see page 372).

הללו את יהוה כל גוים שבחווהו כל האמים

O praise the LORD, all ye nations: praise him, all ye people.

כי גבר עלינו חסדו ואמת יהוה לעולם הללו יה

For his merciful kindness is great toward us: and the truth of the LORD endureth for ever. Praise ye the LORD.

| | | | | |
|-----|---------|----------------------|--------------------------------|--------------|
| 1. | הללו | praise | 5 + 30 + 30 + 6 | = 71 |
| 2. | את | <i>object marker</i> | 1 + 400 | = 401 |
| 3. | יהוה | the LORD | 10 + 5 + 6 + 5 | = 26 |
| 4. | כל | all | 20 + 30 | = 50 |
| 5. | גוים | nations | 3 + 6 + 10 + 40 | = 59 |
| 6. | שבחווהו | praise him | 300 + 2 + 8 + 6 + 5 + 6 | = 327 |
| 7. | כל | all | 20 + 30 | = 50 |
| 8. | האמים | the peoples | 5 + 1 + 40 + 10 + 40 | = 96 |
| 9. | כי | for | 20 + 10 | = 30 |
| 10. | גבר | heroically great | 3 + 2 + 200 | = 205 |
| 11. | עלינו | unto us | 70 + 30 + 10 + 50 + 6 | = 166 |
| 12. | חסדו | his mercy | 8 + 60 + 4 + 6 | = 78 |
| 13. | ואמת | and the truth of | 6 + 1 + 40 + 400 | = 447 |
| 14. | יהוה | the LORD | 10 + 5 + 6 + 5 | = 26 |
| 15. | לעולם | for ever | 30 + 70 + 6 + 30 + 40 | = 176 |
| 16. | הללו | praise ye | 5 + 30 + 30 + 6 | = 71 |
| 17. | יה | Yah | 10 + 5 | = 15 |

Verse 1 (= words 1 to 8) adds up to 1080, while verses 1 and 2 (= words 1 to 17) add up to 2294. 1080 is the sum of melodic 648 (*g*) and Alamoth 432 (*d'*). For its part 2294 is the sum of melodic 512 (*b*), Alamoth 768 (*e*), Sheminith 768 (*e*), and the notation-number 246. The numbers 1080 and 2294 encrypt a scoring instruction: melody plus Alamoth first time (or verse 1), melody plus Alamoth plus Sheminith second time (or verse 2). [Psalm 117's text of 62 Hebrew letters comprises two 25-letter wings and a 12-letter centre whose 400 gematric value is 2 x 218 (אמיםכיגברעלי). On page 338 we considered two 'ambient circumstances' which may lie behind the numbers 62, 25, and 218.] The psalm contains seventeen Hebrew words and employs seventeen letters of the Hebrew alphabet. Note that the five unused letters (zayin, teth, pe, tzaddi, and qoph) add up in 400 gematria to 286, which is the value of פור (= Pur: see Esther 9. 24). What a banquet has sprung from the number 3762! Once you've digested everything.....

.....we can return to the matter of large-value gematric alphabets.

‘SIX TIMES THE GOSSAMERY THREAD.....’

Certain magi of the internet have capriciously chosen to blow up the corn of the 26 English alphabet in the popping-pan of *the six-times table*.

How shall we name the alphabet which they have created?

Let’s call it ‘the 156 English alphabet’ after the value of its last letter.

A = 6, B = 12, C = 18, D = 24, E = 30, F = 36, G = 42, H = 48, I = 54

J = 60, K = 66, L = 72, M = 78, N = 84, O = 90, P = 96, Q = 102, R = 108

S = 114, T = 120, U = 126, V = 132, W = 138, X = 144, Y = 150, Z = 156

It cannot be without significance that in 156 gematria the French actress JEANNE ROQUES (1889-1957) adds up to the important musical number 864.

From one sober website we learn the terrifying fact that many English words and phrases share the 156 gematric value of 666: CALCULATION, COMPUTER, MARK OF BEAST, MONETARY, NEW YORK, and TERMINALS (is every battery beastly?). Plus two well-known pieces of felicitous language: DEVIL GENE MAN (= DENIM EVANGEL?), and A PERDITION. What INSANITY!

More than one mad gematrist has tried to smear the name of SARAH L PALIN.

That’s enough. How may we *reasonably* endow our English letters with values which on average are notably larger than those of the 800 gematric alphabet?

We can spell the letter-names out in 800 English gematria.

Here’s how the twenty-seven letters of the *Spanish* alphabet are spelled today.

*a, be, ce, de, e, efe, ge, hache, i,
jota, ka, ele, eme, ene, eñe, o, pe, cu,
ere, ese, te, u, uve, uve doble, equis, ye, zeta*

Now although some people still say *y griega* instead of *ye*, the Spanish letter-names have standard spellings. By contrast, many of our English letter-names seem to cry, like Joyce Carol Oates, *Do with me what you will*. Years ago I went through a number of dictionaries and put together the following set of spellings.

*a, bee, cee, dee, e, ef, gee, aitch, i,
jay, kay, ell, em, en, o, pee, cue, ar,
ess, tee, u, vee, double u, ex, wye, zed*

It will help all those who study English as a foreign language if these spellings become standard in the Anglophone world.

Back to gematria. The twenty-six letters of the 800 English alphabet have an average value of about 158.

Say you want an alphabet whose average value is a bit bigger than that. You can spell out THE NAMES OF THE LETTERS in 800 gematria.

The letter A will be one.
 The letter B will be two, plus five, plus five, which is twelve.
 The letter C will be three, plus five, plus five, which is thirteen.
 The letter D will be four, plus five, plus five, which is fourteen.
 The letter E will be five.
 The letter F will be five, plus six, which is eleven.
 The letter G will be seven, plus five, plus five, which is seventeen.
 The letter H will be one plus, plus nine, plus two hundred, plus three, plus eight, which is two hundred and twenty-one.
 The letter I will be nine.
 The letter J will be ten, plus one, plus seven hundred, which is seven hundred and eleven.
 The letter K will be twenty, plus one, plus seven hundred, which is seven hundred and twenty one.
 The letter L will be five, plus thirty, plus thirty, which is sixty-five.
 The letter M will be five, plus forty, which is forty-five.
 The letter N will be five, plus fifty, which is fifty-five.
 The letter O will be sixty.
 The letter P will be seventy, plus five, plus five, which is eighty.
 The letter Q will be three, plus three hundred, plus five, which is three hundred and eight.
 The letter R will be one, plus ninety, which is ninety-one.
 The letter S will be five, plus one hundred, plus one hundred, which is two hundred and five.
 The letter T will be two hundred, plus five, plus five, which is two hundred and ten.
 The letter U will be three hundred.
 The letter V will be four hundred, plus five, plus five, which is four hundred and ten.
 The letter W will be four, plus sixty, plus three hundred, plus two, plus thirty, plus five, plus three hundred, which is seven hundred and one.
 The letter X will be five, plus six hundred, which is six hundred and five.
 The letter Y will be five hundred, plus seven hundred, plus five, which is twelve hundred and five.
 The letter Z will be eight hundred, plus five, plus four, which is eight hundred and nine.

That gives you a third numerical alphabet, which runs as follows.

A = 1, B = 12, C = 13, D = 14, E = 5, F = 11, G = 17, H = 221, I = 9

J = 711, K = 721, L = 65, M = 45, N = 55, O = 60, P = 80, Q = 308, R = 91

S = 205, T = 210, U = 300, V = 410, W = 701, X = 605, Y = 1205, Z = 809

We can call this alphabet 'the 809 alphabet' after the value of its final letter. Its twenty-six letters have an average value of about 265. In the 809 alphabet the word FOX adds up to 676, which happens to be the square of twenty-six.

$$11 + 60 + 605 = 676$$

Now say you want something smaller than the 400 English alphabet, but bigger than the 26 English alphabet, whose letters have an average value of less than fourteen. You can spell out THE NAMES OF THE LETTERS in 26 gematria.

The letter A will be one.
 The letter B will be two, plus five, plus five, which is twelve.
 The letter C will be three, plus five, plus five, which is thirteen.
 The letter D will be four, plus five, plus five, which is fourteen.
 The letter E will be five.
 The letter F will be five, plus six, which is eleven.
 The letter G will be seven, plus five, plus five, which is seventeen.
 The letter H will be one plus, plus nine, plus twenty, plus three, plus eight, which is forty-one.
 The letter I will be nine.
 The letter J will be ten, plus one, plus twenty-five, which is thirty-six.
 The letter K will be twenty, plus one, plus twenty-five, which is forty-six.
 The letter L will be five, plus twelve, plus twelve, which is twenty-nine.
 The letter M will be five, plus thirteen, which is eighteen.
 The letter N will be five, plus fourteen, which is nineteen.
 The letter O will be fifteen.
 The letter P will be sixteen, plus five, plus five, which is twenty-six.
 The letter Q will be three, plus twenty-one, plus five, which is twenty-nine.
 The letter R will be one, plus eighteen, which is nineteen.
 The letter S will be five, plus nineteen, plus nineteen, which is forty-three.
 The letter T will be twenty, plus five, plus five, which is thirty.
 The letter U will be twenty-one.
 The letter V will be twenty-two, plus five, plus five, which is thirty-two.
 The letter W will be four, plus fifteen, plus twenty-one, plus two, plus twelve, plus five, plus twenty-one, which is eighty.
 The letter X will be five, plus twenty-four, which is twenty-nine.
 The letter Y will be twenty-three, plus twenty-five, plus five, which is fifty-three.
 The letter Z will be twenty-six, plus five, plus four, which is thirty-five.

That gives you a fourth numerical alphabet, which runs as follows.

A = 1, B = 12, C = 13, D = 14, E = 5, F = 11, G = 17, H = 41, I = 9

J = 36, K = 46, L = 29, M = 18, N = 19, O = 15, P = 26, Q = 29, R = 19

S = 43, T = 30, U = 21, V = 32, W = 80, X = 29, Y = 53, Z = 35

We can call this alphabet 'the 35 alphabet' after the value of its final letter. Its twenty-six letters have an average value of about 26. In the 35 alphabet the word FOX adds up to 55, which happens to be the triangular number of ten.

$$11 + 15 + 29 = 55$$

We are going to use the 809 and 35 English gematric alphabets NOT AT ALL. Oblige me for a moment by surveying the virtual world of English gematria.

Pretend that there are FOUR gematric alphabets in English.
 The first one is the 800 alphabet of units, tens, and hundreds.
 The second one is the 26 alphabet which runs from one to twenty-six.
 The third one is the 809 alphabet, which spells out the names of letters in 800 gematria.
 The fourth one is the 35 alphabet, which spells out the names of letters in 26 gematria.

Now stop pretending and come back to the actual world of Hebrew gematria. I'm going to put several facts in a box of severe appearance.

There really are FOUR gematric alphabets in Hebrew. Each one of them is named after the numerical value of its final letter TAU, whose name is spelled tau-wau.

The first alphabet is the 400 alphabet of units, tens, and hundreds.

The second alphabet is the 22 alphabet which runs from one to twenty-two.

The third alphabet is the so-called '406 alphabet', which spells out the names of the letters in 400 gematria.

The fourth alphabet is the so-called '28 alphabet', which spells out the names of the letters in 22 gematria.

That's all you need to know for the moment. You may be glad to hear that the third and fourth gematric alphabets aren't used very often.

It behoves us now to consider the four rivers which appear in Genesis 2. 10-14.

10 And a river went out of Eden to water the garden; and from thence it was parted, and became into four heads.

11 The name of the first is Pison: that is it which compasseth the whole land of Havilah, where there is gold;

12 And the gold of that land is good: there is bdellium and the onyx stone.

13 And the name of the second river is Gihon: the same is it that compasseth the whole land of Ethiopia.

14 And the name of the third river is Hiddekel: that is it which goeth toward the east of Assyria. And the fourth river is Euphrates.

The four rivers – Pison, Gihon, Hiddekel, and Euphrates -- represent four different numerical alphabets.

PISON IS THE 400 ALPHABET.

Here is Genesis 2. 11 in Hebrew and English.

שם האחד פישון הוא הסבב

The name of the first is Pison: that is it which compasseth

את כל ארץ החוילה אשר שם הזהב

the whole land of Havilah, where there is gold;

The twelve Hebrew words of verse 11 have 400 alphabet gematric values respectively as follows.

340 18 446 12 69 401 50 291 64 501 340 19

Here is Genesis 2. 12 in Hebrew and English.

וזהב הארץ ההוא טוב שם הבדלה ואבן השהם

And the gold of that land is good: there is bdellium and the onyx stone.

The eight Hebrew words of verse 12 have 400 alphabet gematric values respectively as follows.

20 296 17 17 340 49 59 350

Pison is the 400 alphabet, and the three minerals of Havilah (gold, bdellium, and onyx stone) stand for the three kinds of counters (units, tens, and hundreds) which the 400 alphabet contains.

'The gold of that land is good' means that the 400 alphabet is by far the most useful of the four numerical alphabets.

Verse 11's first three words, rendered 'the gold of that land', add up to 333. Here we have an attractive display of a unit, a ten, and a hundred. The three identical digits speak of authorial deliberateness.

וזהב הארץ ההוא = 20 + 296 + 17 = 333

Verse 11's *last* three words display the capacity of the 400 alphabet to express both a two-digit and a three-digit number.

הבדלה (= bdellium) = 49

ואבן השהם (= and the onyx stone) = 409

The congruent first and last digits of the numbers 49 and 409 speak of authorial deliberateness.

Verses 11 and 12 contain two try-it-out equations.

פישון הוא (= Pison: that) = 458

הבדלה ואבן השהם (= bdellium and the onyx stone) = 458

ההוא (= of that) = 17

טוב (= good) = 17

Verse 11's chain of thirty gematric digits provides the material for three equations, of which the first employs the first ten digits, the second employs the middle twelve digits, and the third employs the last eight digits. The number 1495, which represents the total value of the 400 alphabet, appears in each of these equations.

[3401844612] [694015029164] [50134019]

– 340 + 1844 – 6 – 1 – 2 = 1495

– 6 – 9 – 4 + 0 + 1502 + 9 + 1 + 6 – 4 = 1495

[50 + 1340 + 19] + [50 + 13 + 4 + 0 + 19] = 1495

There's no need to tell anyone that the FIRST equation begins on verse 11's FIRST gematric digit.

[3401844612] [694015029164] [50134019]

The SECOND equation begins on a SIX, and the THIRD equation begins on a FIVE. These two facts are encrypted in verse 11's last three gematric digits, which must be read backward.

$$26 \times 35 = 910$$

Furthermore, the SECOND equation begins on the ELEVENTH digit, and the THIRD equation begins on a the TWENTY-THIRD digit. These two facts are encrypted in verse 11's first two gematric digits.

$$11 + 23 = 34$$

Verse 12's chain of nineteen gematric digits also provides the material for three equations, of which the first employs the first seven digits, the second employs the middle five digits, and the third employs the last seven digits. The number 1495, which represents the total value of the 400 alphabet, appears in each of these equations.

[2029617] [17340] [4959350]

$$[2029 - 617] + [2 + 0 + 2 + 96 - 17] = 1495$$

$$[1734 + 0] + [17 - 3 - 40] - [173 + 40] = 1495$$

$$[-4 + 95 + 9 - 35 - 0] + [495 + 935 + 0] = 1495$$

There's no need to tell anyone that the FIRST equation begins on verse 11's FIRST gematric digit.

[2029617] [17340] [4959350]

The SECOND equation begins on a ONE, and the THIRD equation begins on a FOUR. These two facts are encrypted in verse 11's first six gematric digits.

$$[20 + 2] \times [96 + 1] = 2134$$

Is everyone happy so far? Then let's move on.

GIHON IS THE 22 ALPHABET.

Here is Genesis 2. 13 in Hebrew and English.

וּשְׁם הַנְּהַר הַשֵּׁנִי גִיחוֹן

And the name of the second river is Gihon:

הוּא הַסּוֹבֵב אֶת כָּל אֶרֶץ כּוּשׁ

the same is it that compasseth the whole land of Ethiopia.

The ten Hebrew words of verse 13 have 22 alphabet gematric values respectively as follows.

40 44 50 41 12 30 23 23 39 38

Verse 13 contains two try-it-out equations.

$$\text{את} \text{ (= untranslated object marker) = 23}$$

$$\text{כל} \text{ (= the whole) = 23}$$

$$\text{גיחון הוא} \text{ (= Gihon: the same) = 53}$$

$$\text{הסובב את} \text{ (= that compasseth [plus untranslated object marker]) = 53}$$

Verse 13's twenty-second letter speaks of authorial deliberateness.

ושם הנהר השני גיחון הוא הסובב את כל ארץ כוש

The word rendered 'that compasseth' (he-samekh-wau-beth-beth) is spelled here with an extra WAU. You may recall that a wauless form of the same word was used to describe Pison in verse XX.

שם האחד פישון הוא הסבב

The name of the first *is* Pison: that *is* it which compasseth.....

The 22 alphabet's total gematric value of 253, or 'two fifty-three', is encrypted in the four central words of verse 13.

$$[41 + 12 = 53] \text{ and } [30 + 23 = 53] = \text{'two fifty-threes', or by interpretation 253.}$$

Verse 13's chain of twenty gematric digits provides the material for three equations, of which the first employs the first twelve digits, the second employs the middle four digits, and the third employs the last four digits. The number 253, which represents the total value of the 22 alphabet, appears in each of these equations.

$$[404450411230] \quad [2323] \quad [3938]$$

$$4 + 0 + 4 + 4 + 5 + 0 + 4 + 1 + 1 + 230 = 253$$

$$[232 + 3] + [23 - 2 - 3] = 253$$

$$[39 + 38] + [83 + 93] = 253$$

The SECOND equation starts on the THIRTEENTH digit, and the THIRD equation starts on the SEVENTEENTH digit. These two facts are encrypted in verse 12's last four digits.

$$[2 \times 13] + [3 \times 17] = 39 + 38$$

'I've noticed something that may have served as a very simple mnemonic,' says Rosie. 'The SECOND equation starts on the SECOND TWO, while the THIRD equation starts on the THIRD subsequent THREE.'

'That's not all,' says the fifth Elsie. 'We're talking about Genesis chapter TWO, verse THIRTEEN.' She pauses. 'That should remind us that the SECOND equation starts on the THIRTEENTH digit. Then, if we factorize the number *two*

hundred and thirteen, we can remind ourselves of where the **THIRD** equation starts. Look.’ She holds out a strip of paper.

$$213 = 3 \times 71$$

Read the factors of 213 backward as 17 and 3 to show that digit number **SEVENTEEN** marks the beginning of equation number **THREE**.

‘What you’re saying is impossible,’ says Tony Scip. ‘The Biblical writers had absolutely **NOTHING** like our chapter-and-verse system.’

‘Can you give us any evidence to support what you’re saying?’ asks Lettuce Girl.

Tony Scip is silent, so we shall move on.

HIDDEKEL IS THE 406 ALPHABET.

Here are the first eight words of Genesis 2. 14 in Hebrew, together with an English translation.

וּשְׁם הַנְּהַר הַשְּׁלִישִׁי חִדְקֵל

And the name of the third river is Hiddekel:

הוּא הַהַלֵךְ קִדְמַת אַשּׁוּר

that is it which goeth toward the east of Assyria.

Hiddekel is the 406 alphabet, whose letter-names are spelled out in 400 gematria and then added up. Now of course over time the alphabet’s letter-names may come to have variant spellings, but if you’re a mathematician, and if you expect people to use the alphabet in four different ways, *variant spellings will make your third and fourth numerical alphabets completely useless*.

For mathematical purposes there **MUST** have been a standard spelling, and the standard spelling **MUST** have displayed the elegance that speaks of deliberateness.

If you spell the letter-names as follows, departing from the usage of Gesenius in only a single particular (by adding a medial yodh to the spelling of mem), you get an alphabet which is spelled in sixty-two letters.

aleph-lamedh-pe, beth-yodh-tau, gimel-yodh-mem-lamedh, dalet-lamedh-tau, he-aleph

wau-wau, zayin-yodh-nun, cheth-yodh-tau, teth-yodh-tau, yodh-wau-daleth, kaph-pe

lamedh-mem-daleth, mem-yodh-mem, nun-wau-nun, samekh-mem-kaph, ayin-yodh-nun

pe-aleph, tzaddi-daleth-yodh, qoph-wau-pe, resh-yodh-shin, s[h]in-yodh-nun, tau-wau

The twenty-two letter-names may be arranged in two symmetrical groups of eleven.

GROUP ONE: fifteen letters are used to spell the first five letter-names (aleph to he), and sixteen letters are used to spell the next six letter-names (wau to kaph).

GROUP TWO: fifteen letters are used to spell the first five letter-names (lamedh to ayin), and sixteen letters are used to spell the next six letter-names (pe to tau).

In the 406 Hebrew alphabet, the letter-names are spelled out in 400 gematria and then added up. In the 28 Hebrew alphabet, the letter-names are spelled out in 22 gematria and then added up.

If you want to perform a gematric exercise, you can work out the two values of each 'spelled-out' Hebrew letter, and write them in the spaces below.

| | | | | |
|-----------------------|-------|----------------------|-------|--------------------|
| aleph-lamedh-pe | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| beth-yodh-tau | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| gimel-yodh-mem-lamedh | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| daleth-lamedh-tau | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| he-aleph | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| wau-wau | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| zayin-yodh-nun | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| cheth-yodh-tau | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| teth-yodh-tau | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| yodh-wau-daleth | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| kaph-pe | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| lamedh-mem-daleth | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| mem-yodh-mem | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| nun-wau-nun | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| samekh-mem-kaph | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| ayin-yodh-nun | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| pe-aleph | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| tzaddi-daleth-yodh | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| qoph-wau-pe | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| resh-yodh-shin | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| s[h]in-yodh-nun | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |
| tau-wau | _____ | in the 406 alphabet, | _____ | in the 28 alphabet |

Now check to see how many of your forty-four answers are correct.

| | | |
|-----------------------|--------------------------|------------------------|
| aleph-lamedh-pe | 111 in the 406 alphabet, | 30 in the 28 alphabet. |
| beth-yodh-tau | 412 in the 406 alphabet, | 34 in the 28 alphabet. |
| gimel-yodh-mem-lamedh | 83 in the 406 alphabet, | 38 in the 28 alphabet. |
| daleth-lamedh-tau | 434 in the 406 alphabet, | 38 in the 28 alphabet. |
| he-aleph | 6 in the 406 alphabet, | 6 in the 28 alphabet. |
| wau-wau | 12 in the 406 alphabet, | 12 in the 28 alphabet. |
| zayin-yodh-nun | 67 in the 406 alphabet, | 31 in the 28 alphabet. |
| cheth-yodh-tau | 418 in the 406 alphabet, | 40 in the 28 alphabet. |
| teth-yodh-tau | 419 in the 406 alphabet, | 41 in the 28 alphabet. |
| yodh-wau-daleth | 20 in the 406 alphabet, | 20 in the 28 alphabet. |
| kaph-pe | 100 in the 406 alphabet, | 28 in the 28 alphabet. |
| lamedh-mem-daleth | 74 in the 406 alphabet, | 29 in the 28 alphabet. |
| mem-yodh-mem | 90 in the 406 alphabet, | 36 in the 28 alphabet. |
| nun-wau-nun | 106 in the 406 alphabet, | 34 in the 28 alphabet. |
| samekh-mem-kaph | 120 in the 406 alphabet, | 39 in the 28 alphabet. |
| ayin-yodh-nun | 130 in the 406 alphabet, | 40 in the 28 alphabet. |
| pe-aleph | 81 in the 406 alphabet, | 18 in the 28 alphabet. |
| tzaddi-daleth-yodh | 104 in the 406 alphabet, | 32 in the 28 alphabet. |
| qoph-wau-pe | 186 in the 406 alphabet, | 42 in the 28 alphabet. |
| resh-yodh-shin | 510 in the 406 alphabet, | 51 in the 28 alphabet. |
| s[h]in-yodh-nun | 360 in the 406 alphabet, | 45 in the 28 alphabet. |
| tau-wau | 406 in the 406 alphabet, | 28 in the 28 alphabet. |

Here are the values of the 406 gematric alphabet.

aleph = 111, beth = 412, gimel = 83, daleth = 434, he = 6,
wau = 12, zayin = 67, cheth = 418, teth = 419
yodh = 20, kaph = 100, lamedh = 74, mem = 90, nun = 106,
samekh = 120, ayin = 130, pe = 81, tzaddi = 104
qoph = 186, resh = 510, s[h]in = 360, tau = 406

The first eight Hebrew words of Genesis 2. 14 have 406 alphabet gematric values respectively as follows.

462 628 840 1112 129 186 1116 993

Here are the eight words once again, together with an English translation.

וּשְׁם הַנְּהַר הַשְּׁלִישִׁי חִדְקֵל

And the name of the third river is Hiddekel:

הוּא הַהַלֵךְ קִדְמַת אַשּׁוּר

that is it which goeth toward the east of Assyria.

The sixth word he-he-lamedh-kaph (= goeth) has a value of 186, and 186 'goeth' six times into 1116, which is the value of the seventh word.

Notice that the value of 'Hiddekel' (cheth-daleth-qoph-lamedh) is 1112.

$$1112 = [4 \times 278], \text{ or } [278 \times 4]$$

$$4278 - [27 + 8/4] = 4249 \text{ (the total numerical value of the 406 alphabet)}$$

Verse 14's eight-word chain of twenty-six gematric digits provides the material for three equations, of which the first employs the first eleven digits, the second employs the middle ten digits, and the third employs the last five digits. The number 4249, which represents the total value of the 406 alphabet, appears in each of these equations.

[46262884011] [1212918611] [16993]

$$- 46 + 2 - 6 + 288 + 4011 = 4249$$

$$[1 + 2 + 12 - 9 - 18 + 611] + [121 + 2918 + 611] = 4249$$

$$[16 + 99 + 3] + [3996 - 1] + [39 + 96 + 1] = 4249$$

The second and third equations start respectively on gematric digits TWELVE and TWENTY-TWO. These two starting-digits are encrypted in verse 14's first three gematric digits, which have to be read backward.

$$12 \times 22 = 264$$

EUPHRATES IS THE 28 ALPHABET.

Below you see the last four words of Genesis 2. 14 in Hebrew, together with an English translation.

וְהַנְּהַר הַרְבִּיעִי הוּא פַרְת

And the fourth river is Euphrates.

These four words have 28 alphabet gematric values respectively as follows.

109 171 48 97

Euphrates is the 28 alphabet, whose letter-names are spelled out in 22 gematria and then added up.

Here are the values of the 28 gematric alphabet.

aleph = 30, beth = 34, gimel = 38, dalet = 38, he = 6,
 wau = 12, zayin = 31, cheth = 40, teth = 41
 yodh = 20, kaph = 28, lamedh = 29, mem = 36, nun = 34,
 samekh = 39, ayin = 40, pe = 18, tzaddi = 32
 qoph = 42, resh = 51, s[h]in = 45, tau = 28

The 28 alphabet is such a lowly member of the four-river quartet that it can be treated in only seventeen letters.

One equation makes sense in terms of both meaning and number.

Strip the first word (= and the river) of its conjunctive Wau, and add up the values of the *four* letters which remain.

והנהר without the conjunctive ן is הנהר (he-nun-he-resh) = 97

Now add up the fourth word (= Euphrates).

פרת (pe-resh-tau) = 97

The river's name conceals another piece of mathematics..

פרת (= Euphrates) = 97 = [8 + 89]

[8 x 89] = 712 (total numerical value of the 28 alphabet)

Verse 14's four-word chain of ten gematric digits provides the material for three equations, of which the first employs the first four digits, the second employs the middle three digits, and the third employs the last three digits. The number 712, which represents the total value of the 28 alphabet, appears in each of these equations.

[1091] [714] [897]

[10 x 91] - [190 + 1] + [1 + 0 - 9 + 1] = 712

[714] - [7 - 1 - 4] = 712

[- 8 + 97] x [7 + 9 - 8] = 712

The second equation starts on the FIFTH digit, which is SEVEN, while the third equation starts on the EIGHTH digit, which is EIGHT.

These two facts may be encrypted in verse 14's last four gematric digits 4 8 9 7.

[4 + 8] = [5 + 7], and [9 + 7] = [8 + 8]

| | | | |
|---------------------------------------|------|-------|-------|
| פרת | חדקל | גיחון | פישון |
| Pison, Gihon, Hiddekel, and Euphrates | | | |

Here are the four numerical alphabets of Genesis 2. 10- 14.

And a river went out of Eden to water the garden; and from thence it was parted, and became into four heads.

The name of the first is Pison: that is it which compasseth the whole land of Havilah, where there is gold;

And the gold of that land is good: there is bdellium and the onyx stone.

PISON, THE 400 ALPHABET

1 2 3 4 5 6 7 8 9 10 20 30 40 50 60 70 80 90 100 200 300 400

And the name of the second river is Gihon: the same is it that compasseth the whole land of Ethiopia.

GIHON, THE 22 ALPHABET

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

And the name of the third river is Hiddekel: that is it which goeth toward the east of Assyria.

HIDDEKEL, THE 406 ALPHABET

**111 412 83 434 6 12 67 418 419 20 100
74 90 106 120 130 81 104 186 510 360 406**

And the fourth river is Euphrates.

EUPHRATES, THE 28 ALPHABET

30 34 38 38 6 12 31 40 41 20 28 29 36 34 39 40 18 32 42 51 45 28

The four alphabets add up to a total of 6709 (1495 + 253 + 4249 + 712).

All four rivers add up to a total of 1696 (446 + 41 + 1112 + 97).

There are twenty-two letters in the Hebrew alphabet. The four-digit form of each total denotes the four rivers, or the four forms of the alphabet, while the digital sum of each number indicates the number of letters in the alphabet.

$$1 + 6 + 9 + 6 = 22$$

$$6 + 7 + 0 + 9 = 22$$

The sum of the four alphabets, 6709, plus the sum of the four rivers, 1696, equals 8405, whose factors may be construed as referring to the four heads of one river, or to the four numerical forms of the one alphabet.

$$8405 = [41] \times [4 + 1] \times [41]$$

‘I’ve found what may be a sort of check,’ says Delia. ‘It takes SIXTY-TWO letters to spell the Hebrew alphabet, whose four forms yield SIXTY-TWO different numbers. Look.’ She holds out a page.

aleph-lamedh-pe, beth-yodh-tau, gimel-yodh-mem-lamedh,
daleth-lamedh-tau, he-aleph, wau-wau, zayin-yodh-nun,
cheth-yodh-tau, teth-yodh-tau, yodh-wau-daleth, kaph-pe,
lamedh-mem-daleth, mem-yodh-mem, nun-wau-nun,
samekh-mem-kaph, ayin-yodh-nun, pe-aleph,
tzaddi-daleth-yodh, qoph-wau-pe, resh-yodh-shin,
s[h]in-yodh-nun, tau-wau

All twenty-two numbers from the 400 alphabet:

1 2 3 4 5 6 7 8 9 10 20 30 40 50 60 70 80 90 100 200 300 400

Eleven more numbers from the 22 alphabet:

11 12 13 14 15 16 17 18 19 21 22

Seventeen more numbers from the 22 alphabet:

111 412 83 434 67 418 419 74 106 120 130 81 104 186 510 360 406

Twelve more numbers from the 22 alphabet:

34 38 31 41 28 29 36 39 32 42 51 45

Well done, Delia! We appear to have spelled the alphabet correctly.

‘Hold on,’ says Hoagie Caruso McLoy. ‘You’ve got *four* numerical alphabets.’

Yes.

‘So you can make a piece of text say whatever you want,’ says McLoy.

Only if I’m a complete fool. No real scholar ever starts off by WANTING a piece of text to say some particular thing.

‘You know what I mean,’ says McLoy impatiently. ‘Four numerical alphabets give you an enormous range of possibilities.’

You’re talking about the four alphabets as if they were four equals who may be employed with equal frequency. But look at the number of Hebrew words which are used to describe the four alphabetical rivers! PISON gets twenty words, GIHON gets ten words, HIDDEKEL gets eight words, and EUPHRATES gets four words. That allocation of words, taken together with my own experience, emboldens me to speak as follows.

The 400 alphabet is used nearly all the time.

The 22 alphabet is used quite often.

The 406 alphabet is used on certain occasions.

The 28 alphabet is used only on rare occasions.

‘From time to time an important word may have been transcribed into all four alphabets,’ says Delia.

Indeed. Think back to II Samuel 1. 18. The title of David’s lament for Saul and Jonathan is קשת (qoph-shin-tau = ‘[the] bow’).

In 400, 22, 406, and 28 gematria the word qoph-shin-tau has values respectively of 800, 62, 952, and 115. These four values encode the Sheminith-and-Alamoth harmony which David appointed for his lament.

[800 + 115] = 915, the 400 gematric value of על השמינית (= on the Sheminith).

Furthermore, [800 – 62 + 952 – 115] = 1575, which is the sum of melodic *a* = 576, Alamoth *d* = 864, and the fifth notation-number 135.

‘I’ve found a simpler kind of thing in Psalm 7,’ says Delia. ‘Look at the fourfold transcription of CUSH.’ She sets a card on the table.

| |
|--|
| kaph-wau-shin = CUSH (כ ו ש) |
| <i>400 alphabet</i> |
| [kaph = 20] + [wau = 6] + [shin = 300] = 326 |
| <i>22 alphabet</i> |
| [kaph = 11] + [wau = 6] + [shin = 21] = 38 |
| <i>406 alphabet</i> |
| [kaph = 100] + [wau = 12] + [shin = 360] = 472 |
| <i>28 alphabet</i> |
| [kaph = 28] + [wau = 12] + [shin = 45] = 85 |
| 326 + 38 + 472 + 85 = 921 |

‘Now look at the fourfold transcription of SAUL.’ Delia turns her card over.

| |
|---|
| shin-aleph-wau-lamedh = SAUL (ש א ו ל) |
| <i>400 alphabet</i> |
| [shin = 300] + [aleph = 1] + [wau = 6] + [lamedh = 30] = 337 |
| <i>22 alphabet</i> |
| [shin = 21] + [aleph = 1] + [wau = 6] + [lamedh = 12] = 40 |
| <i>406 alphabet</i> |
| [shin = 360] + [aleph = 111] + [wau = 12] + [lamedh = 74] = 557 |
| <i>28 alphabet</i> |
| [shin = 45] + [aleph = 30] + [wau = 12] + [lamedh = 29] = 116 |
| 337 + 40 + 557 + 116 = 1050 |

‘What do your two summative equations show us?’ asks Hoagie McLoy.

‘They show us the true identity of Cush, once he stands in front of a mirror,’ Delia replies. ‘Watch.’ She writes an equation on a slip of paper.

four-alphabet CUSH = 921 + its reversal 129 = 1050 = four-alphabet SAUL

Very neat, Miss Benn! I reckon that David did exactly what you have done.

Here’s a cryptogram of the same class which musical readers can explore for themselves. The phrase לבני-קרה (= for the sons of Korah) appears in the headings of several psalms. לבני-קרה really means, *to be accompanied by bowed string instruments*.

(So *teach the children of Judah THE USE OF THE BOW* in II Samuel 1. 18 [AV] is right after all!)

In 400, 22, 406, and 28 gematria the phrase lamedh-beth-nun-yodh qoph-reshecheth has values respectively of 400, 85, 1726, and 250. These four values add up to 2461.

In 400, 22, 406, and 28 gematria the word qoph-shin-tau-wau-tau (קשתות = BOWS) has values respectively of 1206, 90, 1370, and 155. These four values add up to 2821.

Look at the equation which follows.

[2461 + its reversal 1642] = 4103 = [2821 + its reversal 1282]

‘Hold on,’ says McLoy. ‘I still can’t accept the idea of four different sets of numbers.’ He pauses. ‘If you’re determined to go for a hit, you’ll be able to make any word say whatever you want. I mean, you have four different alphabets which are equally valid as tools, and equally available for use.’

Does Mr McLoy ever LISTEN? Let me repeat four sentences from page 413.

The 400 alphabet is used nearly all the time.
The 22 alphabet is used quite often.
The 406 alphabet is used on certain occasions.
The 28 alphabet is used only on rare occasions.

It is ludicrous to say that the four numerical alphabets are *equally valid as tools*, or that they are *equally available for use*. Furthermore, no scholar ever *goes for a hit*, and no scholar ever tries to make a word say *whatever he wants*.

‘But the four alphabets make it possible for you to have an enormous number of permutations,’ says McLoy. ‘If I’m allowed to transcribe every word of the Hebrew Bible in four different ways, I can come up with a whole range of numerical messages. Such an alphabetical tool-kit is hopelessly confusing.’

Is there no limit to your wilful stupidity? Why do you speak of *permutations*? No one allows you to *transcribe every word of the Hebrew Bible in four different ways*. Let me talk about tools, and then I’ll repeat four sentences from page 413.

In my workshop I have a grey plastic box which contains a ratcheted yellow handle along with screwdriving bits for ordinary slot-headed screws, cross-headed Phillips screws, hexagon-socketed Allen screws, and square-socketed Robertson screws. I use slot-headed screws most of the time, cross-headed ones quite often, hexagon-socketed ones occasionally, and square-socketed ones rarely. For some reason I have never found the different screws and bits to be 'hopelessly confusing'.

The 400 alphabet is used nearly all the time.
The 22 alphabet is used quite often.
The 406 alphabet is used on certain occasions.
The 28 alphabet is used only on rare occasions.

Several furious readers are wanting to ask me a question. *Why have you said the same four sentences three times?* Listen. In recent years I have met some very intelligent people who, when confronted with the fact of the four numerical alphabets, behave in the manner of Hoagie Caruso McLoy. As the Abba song puts it, they are 'stubborn and misconceiving'. Instead of listening to what I tell them, they repeat like zombies some equalist fantasy of their own. These people remind me of how the fictional detective Hercule Poirot tried, over and over again, to convince the Muppets that he was not the mythical demigod Hercules. He failed. Let me quote an old Kazakh proverb.

Қасқырды қанша асырасаң да тауға қарап ұлиды

(= No matter how much you train the wolf, he still looks at the mountains and howls).

Look at the rivers, and listen! Of course the four streams of Genesis 2 are four literal streams with four real names, but if the author who describes them is at pains only to record a few interesting facts for latter-day cartographers and mineralogists, his purpose is frivolous.

The four rivers stand for four numerical alphabets.

Furthermore, the **NAMES** of the four rivers create a sonic template around which certain pieces of history will take shape.

Compare the four rivers in Genesis 2 with the four children of Lamech in Genesis 4. Three constructional parallels in the narrative prove that the author was concerned to link the four children of Lamech with the four rivers of Eden.

Three facts about the Hebrew text of Genesis 2. 10-14

After an ELEVEN-word introduction (v 10) we meet a QUARTET consisting of Pison, Gihon, Hiddekel, and Euphrates (the last of the four is given a brief mention involving only FOUR words).

Three facts about the Hebrew text of Genesis 4. 19-22

After an ELEVEN-word introduction (v 19) we meet a QUARTET consisting of Jabal, Jubal, Tubal-cain, and Naamah (the last of the four is given a brief mention involving only FOUR words).

Lamech, the first polygamist in history, is the man who sets up a brutal Cainite version of Eden.

ויקה לו למך שתי נשים שם האחת עדה ושם השנית צלה

And Lamech took unto him two wives: the name of the one was Adah, and the name of the other Zillah.

ותלד עדה את יבל הוא היה אבי ישב אהל ומקנה

And Adah bare Jabal: he was the father of such as dwell in tents, and of such as have cattle.

ושם אחיו יובל הוא היה אבי כל תפש כנור ועוגב

And his brother's name was Jubal: he was the father of all such as handle the harp and organ.

וצלה גם הוא ילדה את תובל קין לטש
כל חרש נחשת וברזל ואחות תובל קין נעמה

And Zillah, she also bare Tubal-cain, an instructor of every artificer in brass and iron: and the sister of Tubal-cain was Naamah.

The Hebrew word for EDEN (ayin-daleth-nun = 70 + 4 + 50) has a 400 gematric value of 124. So does the first word of Genesis 4. 19 (wau-yodh-qoph-cheth = 6 + 10 + 100 + 8).

This first word, which means *and [he] took*, is hyphenated to the word lamedh-wau (= 30 + 6), which means *unto him*.

When we add the gematric value of lamedh-wau to the value of wau-yodh-qoph-cheth, we get a total of 160, which is the 400 gematric value of CAIN's Hebrew name (qoph-yodh-nun).

The original Eden related to four rivers, but the new Cainite Eden relates to the four 'river-children' of Lamech (three sons and one daughter).

Lamech's eldest son Jabal has a name which means RIVER.

'There are MINERALS in both passages,' says the fifth Elsie. 'Gold, bdellium, and onyx stone are associated with the river Pison, while brass and iron are associated with Tubal-cain.'

That is intriguing. And so is the matter of SOUND.

פישון = PISON גיחון = GIHON חדקל = HIDDEKEL פרת = EUPHRATES

יבל = JABAL יובל = JUBAL תובל קין = TUBAL-CAIN נעמה = NAAMAH

You may already have noticed that a certain similarity exists between *the first two members of each quartet*.

‘Yes,’ says Rosie. ‘PISON rhymes vocally with GIHON, and the two names have three letters in common -- yodh, wau, and nun.’

‘JABAL and JUBAL,’ says Delia, ‘have three consonants in common -- yodh, beth, and lamedh.’

‘Look at the *third* member of each quartet,’ you say. ‘Both HIDDEKEL and TUBAL-CAIN have a lamedh and a qoph which are neighbours.’

Indeed. I tend to see each quartet of names as consisting not of A, B, C, and D, but of A1, A2, B, and C.

Pison, Gihon, Hiddekel, Euphrates

NUMBER ONE: pe-yodh-shin-wau-nun

NUMBER TWO (which sounds a bit like NUMBER ONE): gimel-yodh-cheth-wau-nun

NUMBER THREE: cheth-daleth-qoph-resh

NUMBER FOUR: pe-resh-tau

Jabal, Jubal, Tubal-cain, Naamah

NUMBER ONE: yodh-beth-lamedh

NUMBER TWO (who sounds rather like NUMBER ONE): yodh-wau-beth-lamedh

NUMBER THREE: tau-wau-beth-lamedh qoph-yodh-nun

NUMBER FOUR: nun-ayin-mem-he

Now look at the four oracular words of Aramaic which appear in Daniel 5. 25.

מנא מנא תקל ופרסין

Mene, Mene, Tekel, Upharsin

NUMBER ONE: mem-nun-aleph

NUMBER TWO (which sounds exactly like NUMBER ONE): mem-nun-aleph

NUMBER THREE: tau-qoph-lamedh

NUMBER FOUR: wau-pe-resh-samekh-yodh-nun

In verse 28 of chapter 5 the word UPHARSIN, meaning ‘and Parsin’, is converted by Daniel into the three-letter word PERES (pe-resh-samekh), which differs by only one letter from the Hebrew word for Euphrates (pe-resh-tau). The word TEKEL adds up to 666 in the 406 alphabet, and it rhymes with HIDDEKEL.

Consider the Greek names of the four evangelists. Note their gematric total!

Μαθθαιος Μαρκος Λουκας Ιωαννης

In 800 gematria [Μαθθαιος = 340] = [Μαρκος = 431] + [Λουκας = 721] + [Ιωαννης = 1119] = 373 x 7

Matthew, Mark, Luke, John

NUMBER ONE:

MU-ALPHA-theta-theta-alpha-iota-OMICRON-SIGMA

NUMBER TWO (which begins and ends exactly like NUMBER ONE):

MU-ALPHA-rho-kappa-OMICRON-SIGMA

NUMBER THREE:

LAMBDA-omicron-epsilon-KAPPA-sigma

NUMBER FOUR:

iota-omega-alpha-nu-nu-eta-sigma

The name of Luke contains both the L-sound and the K-sound that we find in **HIDDEKEL** and **TEKEL**. For its part the name of John seems to have no connection with **PERES**, but the word which John uses to describe himself in his second and third letters (πρεσβυτερος = *presbuteros*) contains the three consonants of **PERES** in its first syllable.

'I've often wondered about the four kings whom Abram slaughtered,' says Delia. 'Look at verses 1 to 18 of Genesis 14.' She sets a print-out on the table.

1 And it came to pass in the days of **Amraphel king of Shinar, Arioch king of Ellasar, Chedorlaomer king of Elam, and Tidal king of nations;**

2 That these made war with Bera king of Sodom, and with Birsha king of Gomorrah, Shinab king of Admah, and Shemeber king of Zeboiim, and the king of Bela, which is Zoar.

3 All these were joined together in the vale of Siddim, which is the salt sea.

4 Twelve years they served **Chedorlaomer**, and in the thirteenth year they rebelled.

5 And in the fourteenth year came **Chedorlaomer, and the kings that were with him**, and smote the Rephaims in Ashteroth Karnaim, and the Zuzims in Ham, and the Emims in Shaveh Kiriathaim,

6 And the Horites in their mount Seir, unto Elparan, which is by the wilderness.

7 And they returned, and came to Enmishpat, which is Kadesh, and smote all the country of the Amalekites, and also the Amorites, that dwelt in Hazezontamar.

8 And there went out the king of Sodom, and the king of Gomorrah, and the king of Admah, and the king of Zeboiim, and the king of Bela (the same is Zoar;) and they joined battle with them in the vale of Siddim;

9 With **Chedorlaomer the king of Elam, and with Tidal king of nations, and Amraphel king of Shinar, and Arioch king of Ellasar;** four kings with five.

10 And the vale of Siddim was full of slimepits; and the kings of Sodom and Gomorrah fled, and fell there; and they that remained fled to the mountain.

11 And they took all the goods of Sodom and Gomorrah, and all their victuals, and went their way.

12 And they took Lot, Abram's brother's son, who dwelt in Sodom, and his goods, and departed.

13 And there came one that had escaped, and told Abram the Hebrew; for he dwelt in the plain of Mamre the Amorite, brother of Eshcol, and brother of Aner: and these were confederate with Abram.

14 And when Abram heard that his brother was taken captive, he armed his trained servants, born in his own house, three hundred and eighteen, and pursued them unto Dan.

15 And he divided himself against them, he and his servants, by night, and smote them, and pursued them unto Hobah, which is on the left hand of Damascus.

16 And he brought back all the goods, and also brought again his brother Lot, and his goods, and the women also, and the people.

17 And the king of Sodom went out to meet him after his return from the slaughter of **Chedorlaomer, and of the kings that were with him**, at the valley of Shaveh, which is the king's dale.

18 And Melchizedek king of Salem brought forth bread and wine: and he was the priest of the most high God.

'I'm stupid!' says Miss Benn. 'I've left a chart in my study.' She rises to her feet. 'Talk about something else while I go and fetch it.' Delia runs out of the room.

Let me allude to a matter which interested readers can explore for themselves.

ARCANE NUMBERS IN THE WORDS OF PSALM 1

Psalm 1 contains sixty-seven Hebrew words, and 67 is the 22 gematric value of ארון יהוה (= the ark of the LORD). The second, third, fourth, fifth, and sixth words of verse 1 contain respectively 4, 3, 2, 3, and 4 letters. The third, fourth, fifth, sixth, seventh, eighth, and ninth words of verse 2 contain respectively 5, 4, 4, 7, 4, 4, and 5 letters. The second, third, fourth, fifth, and sixth words of verse 3 contain respectively 3, 4, 2, 4, and 3 letters. The first, second, third, fourth, and fifth words of verse 4 contain respectively 2, 2, 6, 2, and 2 letters. Think back to the central-body-plus-wings construction that was mentioned on page 324, and also to the bats that were mentioned on the same page. Four palindromic 'bat-numbers' emerge from Psalm 1. When these four numbers are stacked in order, do they remind you of anything?

| | | | | | | | | | | | | |
|-----|----|-----|----|---|----|---|----|---|----|-----|----|-----|
| | | [4 | -- | 3 | -- | 2 | -- | 3 | -- | 4] | | |
| [5 | -- | 4 | -- | 4 | -- | 7 | -- | 4 | -- | 4 | -- | 5] |
| | | [3 | -- | 4 | -- | 2 | -- | 4 | -- | 3] | | |
| | | [2 | -- | 2 | -- | 6 | -- | 2 | -- | 2] | | |

The first ark was surmounted by winged creatures, and contained the living words of God. The new verbal ark of Psalm 1 is built of winged creatures, and is itself a living word of God. A faith that was centred on physical realities (the ark, the temple, and the national capital) must be replaced by a faith that is based on the written word. See if you can work out how the four 'bat-numbers' are represented in the equation $[1 \times 26] + [2 \times 39] + [3 \times 26] + [4 \times 15] = 242$. In 400 gematria the Hebrew phrase דברי יהוה (= the words of the LORD) adds up to 242. Twenty-two digits (= the alphabet?) compose the verbal ark.

Psalm 1's Hebrew text contains altogether 248 letters. Jewish exiles in Babylon must return to the faith of their stateless ancestor ABRAHAM, the friend of God, whose Hebrew name אברהם adds up in 400 gematria to 248. Notice that Genesis 1. 1 contains the bat-number 3-5-2-5-3 (words 2, 3, 4, 5, 6).

‘Chedorlaomer is the most important of the four kings,’ says Delia. She places a chart on the table. ‘In verses 4, 5, and 17, he is the only king who is mentioned by name.’ She pauses. ‘What’s more, in verse 9 Chedorlaomer is named as number ONE of the four kings. Yet when we first meet him in verse 1, he occupies the third place in the list. Have we a four-rivers connection in verse 1?’

I reckon that we have. Here are the four names as they appear in Genesis 14. 1.

אמרפל אריוך כדרלעמר תדעל

Amraphel, Arioch, Chedorlaomer, Tidal

NUMBER ONE:

ALEPH-mem-RESH-pe-lamedh

NUMBER TWO (which shares an initial ALEPH and a RESH with NUMBER ONE):

ALEPH-RESH-yodh-wau-kaph

NUMBER THREE (which contains a K-sound, a D-sound, and an L-sound):

KAPH-DALETH-resh-LAMEDH-ayin-mem-resh

NUMBER FOUR:

tau-daleth-ayin-lamedh

In Chedorlaomer’s name the dalet, qoph, and lamedh of HIDDEKEL are represented respectively by a dalet, a kaph, and a lamedh. Chedorlaomer first appears as number three in a list of four *because he corresponds to Hiddekel*.

Let me invite all my readers to look for other Biblical quartets which conform even tenuously to the sonic template of the four rivers: A1, A2, B, and C. (You may find it helpful to think in terms of a string quartet: first violin, second violin, viola, and cello!) I hear a faint echo of Genesis 14. 1 when I read Ezekiel 1. 10.

As for the likeness of their faces, they four had the face of a MAN, and the face of a LION, on the right side: and they four had the face of an OX on the left side; they four also had the face of an EAGLE.

Two lines of Hebrew appear below. In the first line you see the Hebrew words for ‘man’, ‘lion’, ‘ox’, and ‘eagle’ from Ezekiel 1. 10. In the second line you see the names of the four kings from Genesis 14. 1. Each ‘first violin’ contains an initial aleph and a mem, while each ‘second violin’ begins aleph-resh-yodh. It is interesting to observe that the name ARIOCH means *fierce lion*.

אדם אריוך שור נשר
אמרפל אריוך כדרלעמר תדעל

The four kings of Genesis 14. 1 fought with five kings OF WHOM ONLY FOUR ARE NAMED: Bera, Birsha, Shinab, and Semeber (see verse 2). The name of Bera begins with beth-resh and ends with ayin. So does the name of Birsha.

ברע ברשע שזאב שמאבר

Bera, Birsha, Shinab, Shemeber

‘A1 and A2 once again,’ says Rosie. ‘First violin and second violin.’

Yes, indeed. For its part number four, **SHEMEBER**, which means ‘winged name’, starts with shin and ends with beth-resh. Number four in Ezekiel 1. 10, which ends with shin-resh, is an **EAGLE**! That reminds me. Look at Proverbs 30. 18-19.

There be three things which are too wonderful for me, yea, four which I know not: The way of an **EAGLE** in the air; the way of a **SERPENT** upon a rock; the way of a **SHIP** in the midst of the sea; and the way of a **MAN** with a maid.

Eagle, serpent, ship and man may constitute another string quartet. The word for **EAGLE** begins with nun, and contains a shin. So does the word for **SERPENT**. Furthermore, the word for **MAN** may contain an echo of Genesis 14. 2, since it ends with beth-resh like **SHEMEBER**.

נשר נחש גבר אניה

eagle, serpent, ship, man

How should we construe the eight quartets at which we have looked briefly? Let me give you my own construction. I take the events which are recorded in Scripture, all of them, to be real. By *actually happening*, these events laid down avenues in the structure of reality along which different entities would later travel for different purposes. (Consider the real story of Hagar, and then consider the use which St Paul makes of her story in Galatians.) The Bible contains a number of tales which really happened, and a number of symbols which themselves were real things. It may be that certain events and objects are important mostly because of the roads that they have made in the body of reality. No nugget of information is nugatory: not the organ of Job 30. 31, and not the reed-box of John 13. 29. You may think it a trivial thing if I tell you that twenty centuries ago, somewhere in Europe, a particular Roman legion made camp. For only one night! Yet the legionaries left vestiges of line and contour which even today may be discerned from the air. Let me state two related facts as we conclude.

First, sheep make paths in the mountains which come to be used for centuries afterward by both animals and humans. Secondly, birds of a sonic feather, like *Clarice* and *Cliff*, often perch side by side on the same verbal branch. Thus in *The Eustace Diamonds* Anthony Trollope describes the figure of Lizzie as ‘slim, and slender’. Thus I Chronicles 26. 15 ends with *Asupim* (האספים), and the following verse begins *To Shupim* (לשפים). And thus in Revelation 21. 20 we find ‘the fifth, sardonyx (σαρδονyx); the sixth, sardis (σαρδιος)’.

‘Listen,’ says Delia. ‘One day, when I was about twelve, I slowly emptied out a bucket of water over a flattish patch of very dry hard-baked soil. There had been no rain for a long time.’ She pauses. ‘The water surprised me by not flowing equitably all over the place, as it might have done in the case of concrete. Instead it found, and employed, a host of little wadis or courses that

had been there waiting for it all the time. History does exactly the same thing. Don't get me wrong. Determinism is a load of nonsense, but historical currents are like streams of water that flow along well-established wadis.'

Yes. Primordial things and events are often the pioneers or the road-builders of world history. It is because of them that whatever happens in later time happens more easily. The paths which they lay down may come to be employed by a whole series of futurities. What has been done once can facilitate a later deed.

| | | | | |
|----------|--------------|--------------|-------|--------|
| JEPHTHAH | FOOLISH OATH | DAUGHTER | DANCE | MURDER |
| HEROD | FOOLISH OATH | STEPDAUGHTER | DANCE | MURDER |

Thus Genesis 4. 24 prefigures both I Samuel 18. 7 and Matthew 18. 22, while Esther 10. 1 prefigures Luke 2. 1. Sometimes early history lays down a path along which later history is *constrained* to make its way. The Hebrew name אליעזר (= Eliezer) becomes Λαζαρος in Greek and *Lazarus* in Latin. In Genesis 15. 2 Abram talks about a close associate called *Eliezer*, and in Luke 16. 25 Abraham talks about a close associate called *Lazarus*. The first three words of Genesis 24. 2 (ויאמר אברהם אל = And Abraham said unto), which add up to 536 in 400 gematria, cryptically identify 'his eldest servant' as Eliezer, whose name in Hebrew (אליעזר) has a 400 gematric value of 318 = 53 x 6. [In Genesis 14. 14 Abram has 318 trained servants.] Eliezer asks Rebecca for 'a little water' in Genesis 24. 17, while in Luke 16. 24 the rich man says to Abraham, '.....send Lazarus, that he may dip the tip of his finger in water, and cool my tongue.....'.

History begins with language. (In the beginning was THE WORD.) What creates a primordial pathway? The sound of words like Pison, Gihon, Hiddekel, and Euphrates. It is SOUND that underlies the template of history. Between the ineffectual Eli and the ineffectual Rehoboam, whose mother was another NAAMAH, there are four rulers: Samuel, Saul, David, and Solomon. These four rulers make up a string quartet in which the remarkably similar first and second violins have a two-letter kinship with the cello. (All four letters of Saul's name are found in the five-letter name of Samuel, and so are three letters of Solomon's four-letter name.) Let me print the four names in Hebrew without comment.

שמואל שאול דוד שלמה

'Does the name of David preserve the double D of Hiddekel?' asks Rosie.

'That is a *wild* question, dear!' replies Delia. 'And here's an even wilder one. Do the four kings of Genesis 14. 1 prefigure four periods of world history?' She holds out a strip of paper. 'Look at what Hedda Gabler wrote last night, in the middle of a hideously long rehearsal.'

| | | |
|---------------------------|---|------------------------------|
| Amraphel king of SHINAR | = | all the Near Eastern empires |
| Arioch king of ELLASar | = | HELLAS (Greece) |
| ChedorlaOMER king of Elam | = | ROME |
| TIDAL king of nations | = | the modern maritime empires |

I'm beginning to feel dizzy. You know what Dante said.

*Quando s'appressano o son, tutto è vano
nostro intelletto.....*

When these things approach, or are seen to be, all our clever thinking is useless.

And hark! Sumer is icumen in. By way of telling us that she will soon be departing, my redoubtable cleaning lady has opened the kitchen door. Mrs Hudson, or Mrs Prothero -- her real name escapes me for the moment -- is listening to a group called *They Might Be Giants* on the radio.

*The Mesopotamish sun is beating down,
And making cracks in the ground,
But there's nowhere else to stand
In Mesopotamia [No one's ever seen us],
The kingdom where we secretly reign [And no one's ever heard of our band],
The land where we invisibly rule*

*As the Mesopotamians:
Sargon, Hammurabi, Ashurbanipal, and Gilgamesh.....*

The ground of modern life displays many cracks that were made long ago, but our Latinless modern leaders haven't bothered to learn history. Enough! Before we dine, let me set down the Ten Celebrated Quartets at which we have glanced.

Pison, Gihon, Hiddekel, Euphrates;
Jabal, Jubal, Tubal-cain, Naamah;
Mene, Mene, Tekel, Upharsin;
Matthew, Mark, Luke, John;
Amraphel, Arioch, Chedorlaomer, Tidal;
Man, lion, ox, eagle;
Bera, Birsha, Shinab, Shemeber;
Eagle, serpent, ship, man;
Samuel, Saul, David, Solomon;
Empires: the ancient Near East, Greece, Rome, the modern maritime nations.

Delia will tell us something about the number 198,944 over dinner. Tomorrow afternoon we'll conclude our discussion of the four alphabetical rivers.

A CUSHY JOB FOR THE 406 ALPHABET

We saw on page 262 how the number 198,944 (= 46675 + 39241 + 113028) encapsulates everything that David has to say about the square and cube roots of two and three. Now that we're acquainted with the 406 Hebrew alphabet we'll be able to see more in the name of CUSH (kaph-wau-shin).

שגיון לדוד אשר-שר ליהוה על-דברי-כוש בן-ימיני

(= Shiggaion of David, which he sang unto the LORD,
concerning the words of CUSH the Benjamite).

In 406 gematria the word kaph-wau-shin has a value of [100 + 12 + 360] = 472. By putting the value 472 to work *four times*, David generates the number 198,944, which seals up the sum of *four different roots*.

[472 – its reversal 274] = 198, and [472 + 472] = 944

HOW SEVEN LETTERS ENCODE THE WHOLE GITTITH SYSTEM

על הגתית (ayin-lamedh he-gimel-tau-yodh-tau = upon the Gittith)

| | | | |
|-------------------------------|------------------------------------|---|------|
| 400 alphabet gematric values: | 70 + 30 + 5 + 3 + 400 + 10 + 400 | = | 918 |
| 22 alphabet gematric values: | 16 + 12 + 5 + 3 + 22 + 10 + 22 | = | 90 |
| 406 alphabet gematric values: | 130 + 74 + 6 + 83 + 406 + 20 + 406 | = | 1125 |
| 28 alphabet gematric values: | 40 + 29 + 6 + 38 + 28 + 20 + 28 | = | 189 |

$$918 + 90 + 1125 + 189 = 54 \times 43$$

Unitary string-lengths of the four Gittith scales, and the scalar totals:

| | | | |
|-------------------------------|---------------------------------|-------|------|
| 1. <i>d e f g a b c' d'</i> | 864 768 729 648 576 512 486 432 | Total | 5015 |
| 2. <i>g a c d d' e' g a</i> | 648 576 972 864 432 384 648 576 | Total | 5100 |
| 3. <i>b c' a b f g e f</i> | 512 486 576 512 729 648 768 729 | Total | 4960 |
| 4. <i>d' e' c' d' d e c d</i> | 432 384 486 432 864 768 972 864 | Total | 5202 |

$$5015 + 5100 + 4960 + 5202 = 20277$$

20277 + the alphabetical notation-numbers 69 81 93 114 135 246 357 400 = 21772

$$21772 = 4 \text{ (denoting FOUR-part harmony)} \times 5443$$

על הגתית in FOUR-alphabet gematria = 54 x 43

Notes of the second, third, and fourth scales are shown below in intervallic relation to the notes of the first or melodic scale.

- [2.] 4th above, 4th above, 4th below, 4th below, 4th above, 4th above, 4th below, 4th below
 [3.] 6th above, 6th above, 3rd above, 3rd above, 3rd below, 3rd below, 6th below, 6th below
 [4.] 8th above, 8th above, 5th above, 5th above, 5th below, 5th below, 8th below, 8th below

$$[1 \times 468] + [2 \times 468] + [3 \times 435] + [4 \times 435] + [5 \times 435] + [6 \times 435] + [7 \times 468] + [8 \times 468] = 16254$$

$$16254 = 7 \text{ (number of letters in the phrase על הגתית)} \times [54 \times 43]$$

The four scales employ ten notes: *c, d, e, f, g, a, b, c', d',* and *e'*. When these notes are represented respectively by the single digits 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9,

- 1468 denotes the FIRST notes of the melodic, second, third, and fourth scales,
- 2579 denotes the SECOND notes of the melodic, second, third, and fourth scales,
- 3057 denotes the THIRD notes of the melodic, second, third, and fourth scales,
- 4168 denotes the FOURTH notes of the melodic, second, third, and fourth scales,
- 5831 denotes the FIFTH notes of the melodic, second, third, and fourth scales,
- 6942 denotes the SIXTH notes of the melodic, second, third, and fourth scales,
- 7420 denotes the SEVENTH notes of the melodic, second, third, and fourth scales, and
- 8531 denotes the EIGHTH notes of the melodic, second, third, and fourth scales.

| | |
|--|-----------------|
| The first-note number 1468 and the eighth-note number 8531 | add up to 9999. |
| The second-note number 2579 and the seventh-note number 7420 | add up to 9999. |
| The third-note number 3057 and the sixth-note number 6942 | add up to 9999. |
| The fourth-note number 4168 and the fifth-note number 5831 | add up to 9999. |

$$[2 \times 1 \times 7 \times 7 \times 2] = [4 \times 49], \text{ which may be construed 'four lots of four nines'!}$$

We find the formula על הגתית in the headings of Psalms 8, 81, and 84. Notice that $[8 \times 81 \times 84] = 54432$, which represents a SECOND cryptical appearance of the four-digit number 5443. Even the psalm-numbers may encode a lesson.

‘Good day, everyone.’ Hoagie McLoy speaks in the ponderous manner of an Ascended Master. ‘Perhaps I may be allowed to open the proceedings with a question.’ He pauses. ‘I have no problem with four different species of anything when the four species are clearly established as necessities. Consider for a moment the four kinds of dance that you find in the ancient world.’ The man is bursting with Arcane Wisdom. ‘In the West, as Sir Thomas Elyot tells us, you have Eumelia, Enopliae, Cordax, and Hormus.’ (*Rosie is making a horrendous I’M LOST grimace.*) ‘In the East you have Vibhrama, Vilasa, Bhedva, and Hava.’ (*Now I’m lost as well.*) ‘But why do you need four kinds of Hebrew alphabet?’

‘Let me answer you in purely musical terms,’ replies Delia. ‘Say you start off by notating the white-note scale that runs from *d* to *d*’: that is, from the D below middle C on the piano to the D above middle C.’ She pauses. ‘There you have *the male scale*. Its eight notes correspond to the notional string-lengths eight-six-four, seven-six-eight, seven-two-nine, six-four-eight, five-seven-six, five-one-two, four-eight-six, and four-three-two. Well! Before long you’ll have to take account of *the female scale*, which sounds an octave higher than the male scale.’ A car-horn sounds outside. ‘The eight notes of the female scale correspond to the notional string-lengths four-three-two, three-eight-four, three-six-four-AND-A-HALF, three-two-four, two-eight-eight, two-five-six, two-four-three, and two-one-six.’ Miss Benn pauses again. ‘But someone as intelligent as King David, whose notation of the male scale is characterized by elegance and simplicity, would never have tried to combine an alphabetical notation-number with such an awkward quantity as three-six-four-and-a-half.’

‘Then what would he have done?’ asks McLoy.

‘Easy,’ replies Delia. ‘David would have done the simple obvious elegant thing. He would have used the 400 alphabet for male notation, and the 22 alphabet for female notation. Probably he used two different colours of ink.’

‘You’re *presuming* that David did the simple obvious elegant thing,’ McLoy objects. ‘That is a very dangerous presumption.’

‘Not so!’ says Delia. ‘It is a fair presumption, based on my own experience. You see, I’ve seen David doing simple obvious elegant things before.’

‘What things are you talking about?’ asks McLoy.

‘David’s system of melodic notation,’ Delia replies, ‘and his system of three-part harmony.’ With some effort she suppresses a yawn. ‘Because I’ve managed to find out a certain amount about those two things, I *know* David a little better than many exegetes know him. So I *know* that David is not a dark-minded creator of needless complexities. I mean, if you give David the job of making a Hebrew type-face, he will *never* create a gimel that looks almost exactly like a nun, and he will *never* create a final mem that looks almost exactly like a samekh.’

‘Only scribes and scholars are capable of such preternatural imbecility,’ says Rosie. ‘It’s funny. Cloistered people can become perverse, and even malign.’

‘Correct!’ says Delia. ‘But David isn’t a perverse loser. He’s a man of action. He’s a fighter, a doer, and a leader. You can therefore be certain that when David comes to devise a musical system, he won’t devise some labyrinth of insane

complexities like *musica ficta*.’ She pauses. ‘*Musica ficta* is the plague of early music notation. In modern terms, it represents a failure to indicate accidentals.’ She pauses. ‘Here’s one example. Say you want your performers to sing F sharp. You write F natural, and expect your performers to GUESS that you really mean F sharp.’

‘Are you serious?’ asks the fifth Elsie. (Mr McLoy is scowling ferociously.)

‘Yes!’ replies Delia. ‘Of course there’s a whole set of rules about what you’re supposed to do, and when you’re supposed to do it. The trouble is that scholars are not agreed on exactly what those rules are. *Musica ficta* is one of the most appalling pieces of idiocy in the history of scholarship.’ She pauses. ‘Now forget about *musica ficta*, and go back to the.....’

‘Hold on, dear,’ says Lettuce Girl. ‘The ancient Israelite scale contains what we moderns call *eight white notes*.’ She pauses. ‘What would David have used if he wanted to denote what we moderns call the *five black notes*?’

‘I’m not sure yet,’ Delia replies. ‘But the Hebrew alphabet contains five final-form letters. Those letters *must* have had a purpose.’ She rises to her feet. ‘Their purpose may well have been musical.’

Indeed. Only a loser would prefer to believe, on the grounds of his own ignorance, that the five final-form letters had no useful purpose, or that their purpose was mystical, WHICH AMOUNTS TO PRECISELY THE SAME THING.

I Chronicles 16. 6 encrypts the perpetual three-beat value of the notational letter tau. Look at the phrase which the AV renders ‘with trumpets CONTINUALLY’ (בהצצרות תמיד). Note that $27 = 3 \times 3 \times 3$, and that the word rendered ‘continually’ (תמיד) begins on the twenty-seventh letter of the verse. תמיד has a 400 gematric value of 454, which stands for ‘432 in the 22 musical alphabet’, viz the note *d*’. We are not far away here from English musical terms like ‘recorders at 440’!

‘You’re talking sense, dear.’ Miss Benn appears to be mildly surprised. ‘Now! Let me go back to the four alphabets.’ She looks down at her notebook. ‘We already have a male scale and a female scale, which we associate respectively with the 400 alphabet and the 22 alphabet. In time people make big harps whose scale sounds an octave lower than the male scale, and other people make little pipes like descant recorders whose scale sounds an octave higher than the female scale. What do we do?’ Delia pauses. ‘We do the OBVIOUS SENSIBLE ELEGANT THING. We associate the 406 alphabet with our low-pitched harps, and the 28 alphabet with our high-pitched pipes.’

‘So we use four different alphabets to notate four different octaves,’ you say.

‘Yes!’ says Delia. ‘And we write those alphabets in four different colours of ink.’ She takes a sip of tea. ‘Four *distinct* colours. Maybe black for the male scale, bright red for the female scale, bright blue for the big harps, and bright green for the little pipes.’ Miss Benn pauses. ‘The differently sized letters that are used in the song of Esther 9. 7-9 must represent the same kind of scribal trick. Male choristers sing throughout. Female choristers come in on the ninth note of verse 7, and drop out after the seventh note of verse 9. Big harps come in on the twenty-ninth note of verse 9. Female choristers and little pipes, using

respectively the 22 and the 28 alphabets, come in together on the thirty-first note of verse 9. That thirty-first note is represented by the THIRD letter of verse 9's EIGHTH word, zayin, which bespeaks the number *thirty-eight*. Zayin in 22-plus-28 gematria adds up to thirty-eight.' Delia holds out a photocopied sheet.

7 ואת פרשנדתא ואת דלפון ואת אספתא

And [object marker] Parshandatha, and [o. m.] Dalphon, and [o. m.] Aspatha,

8 ואת פורתא ואת אדליא ואת ארידתא

And [object marker] Poratha, and [o. m.] Adalia, and [o. m.] Aridatha,

9 ואת פרמשתא ואת אריסי ואת ארידי ואת ויזתא

And [object marker] Parmashta, and [o. m.] Arisai, and [o. m.] Aridai, and [o. m.] Vajezatha.....

'The whole thing sounds plausible enough,' says Hoagie McLoy. 'But keep music out of it. If you want me to believe in a quartet of numerical alphabets, you must show me all four of them appearing together in one Biblical verse.'

Fair enough. Consider Song of Solomon 7. 1a (AV, 6. 13a), which is the *locus classicus* for the four numerical alphabets.

שובי שובי השולמית שובי שובי ונחזה בך

(= RETURN, RETURN, O Shulamite; RETURN, RETURN, that we may look upon thee).

The Hebrew word rendered RETURN (here = *Encore!*) is spelled shin-wau-beth-yodh, and pronounced 'shoo-vee'. It is remarkable that the same word is used four times in one short sentence. Remarkable things in literature often have a special purpose. In the 400 alphabet shin-wau-beth-yodh = [300 + 6 + 2 + 10] = 318. Four shoo-vees in the 400 alphabet will therefore add up to 1272.

Now let's transcribe the word shin-wau-beth-yodh into each of the four different numerical alphabets.

| | | | |
|----------------------|---------------------|---|-----|
| in the 400 alphabet, | 300 + 6 + 2 + 10 | = | 318 |
| in the 22 alphabet, | 21 + 6 + 2 + 10 | = | 39 |
| in the 406 alphabet, | 360 + 12 + 412 + 20 | = | 804 |
| in the 28 alphabet, | 45 + 12 + 34 + 20 | = | 111 |

The sum of the four different values of shin-wau-beth-yodh is equal to the sum of four 400-alphabet shoo-vees.

$$[318 + 39 + 804 + 111] = 1272 = [318 + 318 + 318 + 318]$$

Here's what the quadruple *Encore* really means. Come back in four different ways. Or, come back in four different guises. It is possible that Solomon is talking here about something primordial. Notice that in 400 and 22 Hebrew gematria the eight central letters of Genesis 1. 1 add up respectively to 791 and 89, like the seven letters of השולמית (= the Shulamite).

בראשית ברא אלהים את השמים ואת הארץ

Let me finish by setting out all four numerical alphabets in a reference table.

| LETTER | 400 | 22 | 406 | 28 |
|---------------|------------|-----------|------------|-----------|
| aleph | 1 | 1 | 111 | 30 |
| beth | 2 | 2 | 412 | 34 |
| gimel | 3 | 3 | 83 | 38 |
| daleth | 4 | 4 | 434 | 38 |
| he | 5 | 5 | 6 | 6 |
| wau | 6 | 6 | 12 | 12 |
| zayin | 7 | 7 | 67 | 31 |
| cheth | 8 | 8 | 418 | 40 |
| teth | 9 | 9 | 419 | 41 |
| yodh | 10 | 10 | 20 | 20 |
| kaph | 20 | 11 | 100 | 28 |
| lamedh | 30 | 12 | 74 | 29 |
| mem | 40 | 13 | 90 | 36 |
| nun | 50 | 14 | 106 | 34 |
| samekh | 60 | 15 | 120 | 39 |
| ayin | 70 | 16 | 130 | 40 |
| pe | 80 | 17 | 81 | 18 |
| tzaddi | 90 | 18 | 104 | 32 |
| qoph | 100 | 19 | 186 | 42 |
| resh | 200 | 20 | 510 | 51 |
| s[h]in | 300 | 21 | 360 | 45 |
| tau | 400 | 22 | 406 | 28 |

Now the girls are whispering about Aeneas in Acts chapter 9. Delia says *Book VIII, lines 30, 59, and 68*. Rosie says *Book XII, lines 427, 428, and 429*. Delia says *Luke has recorded the historical facts in a way that will appeal to Roman readers*. Suddenly the fifth Elsie addresses me in an altogether unglad voice.

‘Are you going to write two whole chapters of exercises on the 406 and 28 alphabets?’ she asks.

No, I couldn’t face the thought of that. What did Aeneas say? *Desine meque tuis incendere teque querellis*. Stop setting fire to me, and to yourself also, with your plaintive cries. (If you’re gasping for exercise, you can transcribe the seven Hebrew words of Genesis 1. 1 in terms of the 400, 22, 406, and 28 numerical alphabets. All twenty-eight gematric values should add up to 9329.) Photocopy the reference table which appears on page 429, pin it up on the wall above your desk, and bear in mind what I’ve said about frequency of usage.

The 400 alphabet is used nearly all the time.
 The 22 alphabet is used quite often.
 The 406 alphabet is used on certain occasions.
 The 28 alphabet is used only on rare occasions.

We’ve done with chapter 19! But before we stop, let me address all my readers. When you come to study chapter 20, you won’t have a CLUE what’s going on. In fact, by the time you’ve read the first four pages, you’ll be wanting to ask me the three questions that Lemuel’s mother asks her son in Proverbs 31. 2. (*What, my son? and what, the son of my womb? and what, the son of my vows?*) Do something for me now. **PROMISE THAT YOU WON’T ASK ME THOSE THREE QUESTIONS.** Once you read chapter 21 you’ll see what’s been going on.

‘I’ve only started to learn Hebrew, but let me show you one thing before we stop,’ says the fifth Elsie. ‘Last night I wrote out the names of the four rivers, working from left to right.’ She sets a strip of paper on the table.

ת ר פ ל ק ד ח ן ח י ג ן ו ש י פ

‘Don’t ask me why,’ she continues, ‘but I found three of the seventeen letters demanding to be noticed. I’ve written them in large print.’ The fifth Elsie pauses. ‘They *happen* to be equidistant.’ She smiles nervously. ‘I need you to tell me something. Do those three large letters spell a Hebrew word?’

Yes, they do! Read from left to right, the three large letters are shin, wau, and pe. The Hebrew verb shin-wau-pe means BRUISE. You find two forms of the verb in Genesis 3. 15 b:

הוא ישופך ראש ואתה תשופנו עקב

(= it shall bruise thy head, and thou shalt bruise his heel).

Read in the opposite direction, from right to left, the three large letters are pe, wau, and shin. The Hebrew verb pe-wau-shin means THRIVE, and it happens to be the root of the word pe-yodh-shin-wau-nun (= Pison)! I reckon that the fifth

Elsie has found something of considerable importance. What happens in the provisional Eden will give rise to a great warfare. Once that warfare is accomplished, the Victor will create an eternal Eden, and the pleasure of the LORD shall prosper in his hand. More than one reader should take encouragement from the fifth Elsie's discovery. Are you neither a linguist nor a cryptanalyst? Fear not! If your eyes and your mind are open, you may be able to see things that my own stupid notions make it impossible for me to see.

Of course I'm not recanting. A great deal is rotten in the state of Elsie-lore. It was right for me to attack the rot in chapters 10 and 11. But there are more things in heaven and earth than are dreamed of in one person's philosophy.

I want the first edition of *THE LORD SHALL COUNT* to be part of a large cooperative enterprise. The man who tries to spread his net over four rivers and more is bound to make a number of errors. My true friends are the people who tell me when I'm wrong. If you see ANYTHING in the book that needs to be corrected, especially an arithmetical error, please leave a one-line message for me on the Bibal.net Forum, and I'll count you my friend for doing so.

Now look. I'm making my request in an unwontedly serious spirit, so treat it seriously. Let no dark-souled nerdarch rebuke me for failing to write a book about the number 666. If you're interested in 666 from a prophetic point of view, consider how Solomon disobeyed the precept of Deuteronomy 17. 17 by receiving 666 talents of gold in tax every year (I Kings 10. 14, II Chronicles 9. 13). Consider also Adonikam's 666 children in Ezra 2. 13 (the 667 of Nehemiah 7. 18 may include a new-born child). St John says in Revelation 13. 1 that he saw a beast RISE UP out of the sea. 'Adonikam' means *my lord has RISEN UP*. In 400 gematria aleph-daleth-nun-yodh-qoph-mem (= Adonikam) adds up to 205 = [5 x 41], and yodh-sin-resh-aleph-lamedh (= Israel) adds up to 541. If St John does have the name of Adonikam in mind, he may be intending to tell us that the Beast will come from the same race as Adonikam. Anything else about 666? Oh, yes! Remember that 666 is a triangular number. Once you have a world language, and a world government, and a world religion, the number 666 will come to connote a *particular* kind of triangle (see Daniel 11. 37). What should disturb us most about the state of the world? The fact that it already exists.

'Solomon received 666 talents of *gold*,' says Delia. 'Maybe the Beast will create a *gold-standard* currency.' She performs a perfect *fouetté*. 'I have to rehearse tonight, dear, but I'll look up all your references when I get home.' She pauses. 'What are you doing tomorrow?'

Tomorrow is Saturday, so I'm going to play around with a lot of vintage Tesla stuff in my workshop. You know the kind of thing. Valves. Capacitors. Coils.

'Oh, good,' says Delia. 'You can work with that stuff after dinner tonight.' She pauses. 'Listen, dear. I've bought a little Indian harmonium. Presently it's in *Dublin*. I have to pick it up tomorrow, and I need someone to carry it for me.'

I can't believe what you're saying. Do you want me to drive you to Dublin?

'No, no. Both of us will be driven in a small bus.' Delia pauses. 'The so-called Senior Ladies from my church are going on a shopping trip to Dublin tomorrow.' She fixes her guilty eyes on the floor. 'I've bought two tickets. Say you'll go.'

You really want me to sit on a bus with a crowd of cackling old hags.

‘Yes, I do,’ Miss Benn replies. ‘It won’t discommode you. Unlike our last charity event.’ She pauses. ‘A few of the old hags are not much older than you, dear.’

Alas, I can believe it. Often I get worried about my advanced age. Today I feel like the Hindi poet Keśavdās (1555-1617).

चंद्रवदन मृगलोचनी बाबा कहि कहि जाहिं।

(= At times doe-eyed girls with moon-bright faces call me ‘old man’, and go on their way).

‘It would be a lot more worrying if you didn’t notice them,’ says Delia. ‘Now stop getting on like Barzillai the Gileadite. Will you go on my way with me tomorrow?’

All right.

‘Thanks,’ says Delia. ‘We can sleep the whole way there, and the whole way back.’ She pauses. ‘I’ll ring your doorbell at five to seven. Look at the sky, dear!’ (Typical woman. You’d think she was dealing with a baby. *Everything is settled! We shall blithely change the subject!*) And now Miss Benn speaks like an oracle. ‘It’s going to be a tempestuous night.’ Exit.

Oh, no. Here comes someone dressed up as a martial arts master, bearing a tiny strip of paper. It is the third Elsie. ‘What language is *that* written in,’ he asks, ‘and may it be understood to mean, *Eureka! Arthur lies in Stonehenge?*’

URREKE ARETYENHENG

No. It is written in Arrernte, an Aboriginal language, and it means *See you later*.

‘Ah,’ says the third Elsie. ‘So it could be understood to denote King Arthur declaring, *I shall return*. Like General MacARTHUR.’ He pauses. ‘Did you know that the phrase *wunders vil geseit*, which appears in your first epigraph, has the same 800 English gematric value as *SATOR AREPO TENET OPERA ROTAS?*’

At the age of seven I read a *Book of Adventures*. In one of its pictures, the hero (white suit, pith helmet, outstretched right arm) was shown dealing resolutely with a murderous witch-doctor. The caption ran, *WITHOUT HESITATION I EMPTIED MY REVOLVER INTO THE FACE OF THE GIBBERING SHAMAN*.

After dinner I go to the workshop and carve the soundbox of a small Irish harp from a block of Alaska willow. Then for two hours I perform a number of simple electrical experiments.

At midnight I open the door to come out. What a wind! The impetuous fury of the entering gust nearly lifts me from my feet. It is, indeed, a tempestuous yet sternly beautiful night, and one wildly singular in its terror and its beauty.

Half an hour later I’m taking a cup of Keemun tea before a peat fire in my study when the most wonderful lightning-storm gets under way outside. Have I started something with all that Tesla stuff?

A fire is good company at night. For twenty minutes I study two Portuguese poems by Florbela Espanca, the celebrated disciplinarian. At 1.30 am I go to bed.

CHAPTER 20: LIKE THE GARDEN OF THE LORD

*To þat spot þat I in speche expoun
I entred in þat erber grene,
In Augoste in a hyȝ seysoun,
Quen corne is coruen wyth crokeȝ kene.
On huyle þer perle hit trendeled down
Schadowed þis worteȝ ful schyre and schene,
Gilofre, gyngure and gromylyoun,
And pyonys powdered ay bytwene.*

Pearl 37-44

შენ ხარ ვენახი, ახლად აყვავებული

(= You are a vineyard, newly come out in bloom).

King Demetrius I of Georgia

On Saturday morning the choral symphony of birds awakens you at half past ten. How have you managed to sleep so late? You had wanted to rise early and cut the grass. Alas! Two lines from the Estonian epic *Kalevipoeg* sing in your head:

*Aga väsimuse võimus
Võitnud ettevõtetised*

(= But the weight of weariness overwhelmed what you had willed).

An old Armenian icon of St Gregory the Illuminator, which hangs beside your hexagonal wall-clock, has become an abstract symphony of blue, orange, gold, and white. Whatever has happened? Suddenly you remember the spectacular thunderstorm that kept you awake for part of the night. Oooohhhh! As you rise from bed you think of Poe's words: 'the after-dream of the reveller upon opium'.

Languidly you recite a celebrated quatrain by Meng Haoran.

| | | | | | |
|---|---|---|---|---|--------------------------------------|
| 春 | 眠 | 不 | 覺 | 曉 | sunrise, in spring, unseen: I slept! |
| 處 | 處 | 聞 | 啼 | 鳥 | then birds were piping all around. |
| 夜 | 來 | 風 | 雨 | 聲 | songs of a tempest filled the night; |
| 花 | 落 | 知 | 多 | 少 | petals fell: who knows their sum? |

A person once told you that the three final characters 知多少, which are represented in English by the question *WHO KNOWS THEIR SUM?*, might contain a musical riddle. 知 is an *eight-stroke* character, 多 is a *six-stroke* character, and 少 is a *four-stroke* character. The question *WHO KNOWS THEIR SUM?* may therefore contain its own answer. 864 is the fundamental number of music.

With sublime clarity you remember the same person showing you how a tributary quatrain of Li Bai might allude to the cryptic 864 of Meng Haoran. Li Bai's quatrain has twenty characters whose numbers of strokes are as follows.

| | | | | | | |
|---|---|---|---|---|---------------------------|-------------|
| 對 | 酒 | 不 | 覺 | 暝 | 14, 10, 4, 20, 14 strokes | (total 62); |
| 落 | 花 | 盈 | 我 | 衣 | 13, 8, 9, 7, 6 strokes | (total 43); |
| 醉 | 起 | 步 | 溪 | 月 | 15, 10, 7, 13, 4 strokes | (total 49); |
| 鳥 | 遠 | 人 | 亦 | 稀 | 11, 14, 2, 6, 12 strokes | (total 45). |

I sat drinking, with night unseen. Falling petals covered my garment. Intoxicated, I rose and walked to the moonlit stream. The birds were far away, and men also few.

$$[(6 \times 2 \times 4 \times 3) + (4 \times 9 \times 4 \times 5)] = 864 \text{ (知多少)}$$

You yawn helplessly as you come out of the bathroom. Li Bai's twenty numerical petals are really thrilling. Suddenly you smell kippers. Then you hear unfamiliar music. Have you left a radio on all night? You open the kitchen door.

Before your bemused eyes, Rosie is setting a single place at the hornbeam table. By some miracle, your beloved has managed to let herself in.

After a moment you recognize the nacreous Benedikt Brothers china that she bought you for your birthday last year.

'What is that music?' you ask.

'It's Korngold,' Rosie answers. '*The Tempest*.'

To you at the moment, *tempest* means *petals*.

So dreamy numerical thoughts relating to petals occupy you while your beloved grinds four ounces of Hawaiian coffee-beans in the hand-mill.

Have petals anything to do with the Fibonacci series?

1 1 2 3 5 8 13 21 34 55 89

It appears to your opiated mind that they have. (If what you've read is true.)

Buttercups have FIVE petals.

Some delphiniums have EIGHT petals.

Corn marigolds have THIRTEEN petals.

Some asters have TWENTY-ONE petals.

Daisies can be found with THIRTY-FOUR, FIFTY-FIVE, and EIGHTY-NINE petals.

Meng Haoran said something about petals in the fourth line of his poem.

花 落 知 多 少 petals fell -- who knows their sum?

The two characters 花落 (first two characters of line 4) are represented in English by the words *petals fell*. 花 happens to be an *eight-stroke* character, and 落 happens to be a *thirteen-stroke* character! That's enough nonsense.

At noon you enter your greenhouse in order to pollinate five melon plants. (The *smale foweles maken melodye*, as Chaucer says, your horse Flame is whinnying excitedly in his stable, the sun is shining with all his might, and yet you're still yawning.) Melon plants produce both male and female flowers. Each male flower has a thin stalk behind its petals, while each female flower has a miniature melon behind its petals. You remove a male flower, fold back its petals, and brush it against a number of the female flowers. Then you allow the fruit to set. Once the melons have attained the size of golf balls, you'll supply the plants with plenty of water and liquid manure. Before long you'll need to support each growing melon with a little hanging net.

Even as you look forward to harvesting and eating the mature fruit, you're struck by the large number of seeds which a full-grown melon contains. Every one of these seeds represents an infinity of future generations. You realize that God is greatly interested in GROWTH. (Genesis 1. 28: *Be fruitful, and multiply*. Isaiah 9. 7: *Of the increase of his government and peace there shall be no end*.) The potential infinity that lives inside the melon reminds you of what Wisdom says in Proverbs 8. 19: *My fruit is better than gold*. One metal suggests another. You recall six words from Proverbs 2. 4: *If thou seekest her [wisdom] as silver*. And then you recall the question of Job 28. 12: *where shall wisdom be found?* Genesis 1. 29 sounds in your mind as an answer to Job's question. *I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed*. Suddenly you hear Wisdom herself speaking.

Where am I? Seek within the melon.

You come out of your greenhouse, rejoicing in the bright sunlight. Four sparrows are singing away in the oak-tree. At the bottom of the garden, a pebble-bedded stream is making its own salubrious music. Flame exhales noisily as Rosie leads him out of his stable. You mark with delight the surprisingly slow and deliberate metronome-song of iron shoes on granite cobbles. All around the garden you can feel what Robert Browning called 'presences plain in the place', and you remember Zechariah 1. 10: *These are they whom the LORD hath sent to walk to and fro through the earth*.

Everything in God's creation is ALIVE! The sparrows, the oak-tree, the stream, Flame, and even the granite cobbles.

'Let me quote three words from Acts 12. 15,' says Colin Tate. *'Thou art mad.'*

'Let me quote nine words from Revelation 3. 17,' you reply. *'Thou art wretched, and miserable, and poor, and blind.'*

Colin Tate is shocked by your answer. (He believes first that he has the right to hit you, and secondly that you have no right to hit him back.) You go on to quote Joshua 24. 26-27: *'Joshua wrote these words in the book of the law of God, and*

took a great stone, and set it up there under an oak, that was by the sanctuary of the LORD. And Joshua said unto all the people, Behold, this stone shall be a witness unto us; for IT HATH HEARD all the words of the LORD which he spake unto us: it shall be therefore a witness unto you, lest ye deny your God.'

That was *exactly* the right Scripture to adduce. Joshua's stone HEARD all the words of the LORD. Does Colin Tate the commentator imagine that the cobbles of a path and the pebbles of a stream can be neither hearers nor witnesses? He needs to start reading the Bible. According to Habakkuk 2. 11, a stone can cry out. According to Joshua 24. 27, a stone can hear. And if Psalm 148 means what it says, many creatures are capable not only of perception, but also of expression. (All God's angels. All his hosts. Sun. Moon. Stars of light. Heavens of heavens. Waters that be above the heavens. Dragons. Deeps. Fire. Hail. Snow. Vapour. Stormy wind. Mountains. All hills. Fruitful trees. All cedars. Beasts. All cattle. Creeping things. Flying fowl. Kings of the earth. All people. Princes. All judges of the earth. Young men. Maidens. Old men. Children.) The Psalmist addresses these creatures, so they must be capable of perception. And he tells them to praise the LORD, so they must be capable of expression.

'I think you're a pantheist,' says Colin Tate.

A pantheist, sez he. Well, here's what you were happy to sing last Sunday.

*Hark! The song of jubilee,
Loud as mighty thunder's roar,
Or the fullness of the sea
When it breaks upon the shore:
Hallelujah, for the Lord
God Omnipotent shall reign;
Hallelujah! Let the word
Echo round the earth and main.*

*He shall reign from pole to pole,
With illimitable sway:
He shall reign, when like a scroll
Yonder heavens have passed away;
Then the end: beneath His rod,
Man's last enemy shall fall;
Hallelujah! Christ in God,
God in Christ, is all in all.*

But you're not a pantheist. You're a panBiblicalist. You believe the entire Bible. You believe Genesis 1, and Genesis 19, and I Kings 1. 40, and Job 41, and Psalm 148, and I Timothy 2. 12, and even Romans 8. 22 (*the whole creation groaneth*).

It's partly because of dull-minded persons like Colin Tate that the whole creation *is* groaning. Listen to two sentences of their creed.

Vegetal and mineral things are by definition inanimate. Animals live only so that humans may use them.

Many modern Christians have chosen to disobey certain Biblical commands.

The Lord Jesus says *Consider the lilies of the field*, and these Christians say NO.

The Lord Jesus says *Behold the fowls of the air*, and these Christians say NO.

The Lord Jesus says *Leap for joy*, and once again these Christians say NO.

When you tell them that they're living in disobedience, they look at you as if you're not right in the head. How can you call them 'disobedient'? They believe

all the right theological doctrines, don't they? If you're talking about creation, they agree with what the political commentator Ann Coulter said recently.

I take the Biblical idea. God gave us the earth. We have dominion over the plants, the animals, the trees. God says, 'Earth is yours. Take it. Rape it. It's yours.'

Some professing Christians will happily kill an entire forest, turn its trees into money, and leave a desert behind. The murder of a woodland enables them to live a life of crass material opulence. If you want to articulate the cultural poverty of that life, you should employ two lines of a dreadful British song from 1969.

*I cut down trees, I eat my lunch,
I go to the lavatree.*

While regarding art, music, and literature as 'unspiritual', the professing Christians of whom I speak spend money prodigally on their vehicles, their clothes, their hairstyles, their bathrooms, their spectacles, and their teeth.

When they come to judge their fellow-Christians, they look on the outward appearance. Do you combine a mouthful of immaculate alabaster with a glorified jeep the size of a minibus? Then you will excite their respect.

It must delight Satan to perceive that the most vulgar forms of materialism can flourish in the sub-plebeian culture of a stern evangelical church.

Meanwhile, back at the New Age Ranch, people who have been sickened by the ruthless greed of professing Christians are concerned to treat the earth with a loving respect.

British parliamentarians speak of each other as 'honourable members'. Christians must take care to be honourable members of God's creation. In Revelation 7. 3 an angel says, *Hurt not the earth, neither the sea, NOR THE TREES, till we have sealed the servants of our God in their foreheads.* And in Revelation 11. 18 the twenty-four elders thank God that the time is come when he will *destroy them which destroy the earth.*

A strict religious person who hurts the trees and helps to destroy the earth will get no marks in the next life for having been a puritanical servant of mammon.

By contrast, a true believer who is getting ready for heaven will exult TODAY in the presence of the mountains, the hills, and the trees which are his fellow-creatures. Isaiah 55. 12 says, *For you shall go out with joy, and be led forth with peace: the mountains and the hills shall break forth before you into singing, and all the trees of the field shall clap their hands.*

Singing! Quintilian's exemplary phrase *pratium ridet* (= the meadow smiles) unites in your mind with Goethe's sentence *Wie lacht die Flur* (= How the meadow laughs). And with Psalm 65. 13. *The pastures are clothed with flocks; the valleys also are covered over with corn; they shout for joy, they also sing.*

You recall Genesis 2. 9.

And out of the ground made the LORD God to grow every tree that is pleasant to the sight, and good for food.....

As you consider all the trees which God made on the third day of creation, you begin to sing Ludwig Senfl's wonderful song *Es taget vor dem Walde*. Ludwig Senfl was a friend of Martin Luther. His music often makes you want to 'shout for joy'.

Es taget vor dem Walde:

Stand ûf, Kätterlîn!

Die Hasen laufen balde,

Stand ûf, Kätterlîn, holder Buehl!

Heiahô, du bist mîn, sô bin ich dîn,

Stand ûf, Kätterlîn!

Day is breaking beside the forest:

Wake up, Katherine!

Soon the hares will be running about:

Wake up, Katherine, dear love!

Hey-ho, you are mine, so I am yours.

Wake up, Katherine!

In Senfl's song a healthy man associates his girlfriend with daybreak, with the trees of a forest, and with running hares. That man wants nothing to do with the necrophilia which characterizes introverted poetry. Do you know what I mean? If you don't, read quickly through the first thirty-two of Shakespeare's sonnets. You'll be well punished for your morbidity, as Lady Bracknell says, by some of the poet's words.

| | | | |
|-----------|------------------------------|-----------|--|
| Sonnet 1 | die, buriest, grave | Sonnet 16 | decay |
| Sonnet 3 | tomb, die, dies | Sonnet 17 | tomb |
| Sonnet 4 | tomb'd | Sonnet 18 | death |
| Sonnet 6 | death, death's, worms | Sonnet 22 | death |
| Sonnet 7 | mortal, diest | Sonnet 23 | decay |
| Sonnet 9 | die | Sonnet 25 | buried, die |
| Sonnet 11 | decay, perish, die | Sonnet 30 | death's |
| Sonnet 12 | bier, die | Sonnet 31 | dead, buried, dead, grave, buried |
| Sonnet 13 | death, decay | Sonnet 32 | death, deceased, died |
| Sonnet 15 | decay | | |

From those words, from those sonnets, you flee aghast. Why? Because you want to interact with the exuberantly varied LIFE of the outdoor world. When you roam in the *path* of a thousand changes, you yourself change in harmony with the *law* of a thousand changes. A pattern of immense transformation displays itself before your eyes when you look at the natural world. You perceive a thousand different things, and not one of them is out of tune with its fellows. You hear a natural symphony of different pipings which accord with each other as merrily as they accord with your own person. In his 'Prelude to the Orchid Pavilion', Wang Xizhi recorded some elements of the harmony.

茂 林 修 竹

(= a multitude of trees, luxuriant bamboos):

又 有 清 流 激 湍

(= in addition there is a clear fast-flowing stream).

Wang Xizhi would have been glad to read Song of Solomon 2. 10-13. *My beloved spake, and said unto me, Rise up, my love, my fair one, and come away. For, lo,*

the winter is past, the rain is over and gone; The flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land; The fig tree putteth forth her green figs, and the vines with the tender grape give a good smell. Arise, my love, my fair one, and come away.

Rise up, my love! *Stand ûf, Kätterlîn!* The flowers appear on the earth. Among them are the sunflowers, whose heads will soon be full of Fibonacci numbers. A garden is the right place for mathematical work. What did William Blake say?

*Ah, sunflower, weary of time,
Who countest the steps of the sun.....*

Above your head the sun really is *the yonge sonne* of Chaucer's Prologue (= the young sun), and not the 'busy old fool' of Donne's 'The Rising Sun', a poem which you have always detested. Of course the sun *is* busy, and life on earth depends on what Vergil calls *solis labores* (= the labours of the sun). You recall how the one who in Malachi 4. 2 is called *the Sun of righteousness* once said, *I work* (John 5. 17). In Psalm 19. 5 David says that the sun *rejoiceth as a strong man to run a race*, and in John 8. 56 the Lord Jesus says to the Jews, *Your father Abraham rejoiced to see my day*. What was that 'day'? The day on which the LORD appeared to Abraham by the oak-trees of Mamre. On that day the LORD said of Abraham (Genesis 18. 19), *he will command his children and his household after him, and they shall keep the way of the LORD*.

The flying hour seems to have folded its wings. Rosie is singing 'St Patrick's Breastplate' into Flame's left ear, and what Haydn might have called the Bird Quartet is trying to join in. For two minutes you survey with rapture the lawns, flower-beds, vegetable-beds and trees which make up your back garden.

A small tortoiseshell butterfly alights on the stable door. What did the heroic Turkish poet Nazım Hikmet write about a bailiwick much humbler than your own?

Ben bu avluda bahtiyar yaşadım bilemediğiniz kadar

(= In this yard I've been happier than you could ever imagine).

You feel overwhelmed with blessedness. At length you find yourself thinking of Joshua 1. 6: *Be strong and of a good courage: for unto this people shalt thou divide for an inheritance the land*. Overhead the solar athlete of Psalm 19 is working away merrily. Once again you hear Wisdom speaking.

The strong one runs to and fro, dividing up his household.

Are you going mad? No! Today, you are being unusually sane.

Those who live their lives in accordance with narrow notions of what is normal fail to perceive many wonderful things.

Some music students dwell in cities and do only what their teachers tell them to do. These students go through life without ever hearing a guillemot, or a gemshorn, or a redshank, or a rebec, or a coot, or a conch. When they read the Swedish poet Harry Martinson's phrase *den träflöjtsklara göken* (= the cuckoo, clear as a wooden flute), they don't realize how exquisitely right the adjective is.

Earnest indoor people who make a religion out of *early to bed, early to rise* go through life without ever seeing a bat, or an owl, or a meteor shower. Moreover, they never experience the peculiar states of receptivity which are known to those of us who undersleep often and oversleep occasionally.

Listen to how Joseph Freiherr von Eichendorff' begins his greatest novel *Aus dem Leben eines Taugenichts* (= From the life of a ne'er-do-well).

Das Rad an meines Vaters Mühle brauste und rauschte schon wieder recht lustig, der Schnee tröpfelte emsig vom Dache, die Sperlinge zwitscherten und tummelten sich dazwischen; ich saß auf der Türschwelle und wischte mir den Schlaf aus den Augen; mir war so recht wohl in dem warmen Sonnenscheine.

Once again the wheel of my father's mill was merrily singing its noisy song. Drops of melted snow were falling busily from the roof. The sparrows were chirping and darting about all over the place. I was sitting on the doorstep, rubbing the sleep out of my eyes, and feeling altogether content in the warm sunshine.

Then listen to the Chuvash poet Konstantin Ivanov.

Силпи чăваш ялĕнче
Юр ирĕлчĕ васкаса.

In the Chuvash village of Silpi
The snow melts quickly.

When snow melts, *you see things*. Truth is not some ghastly dead abstraction! Are you more likely to perceive truth by sitting at a desk indoors and giving your five senses nothing to do? No, you're not. According to I Corinthians 13. 6, charity *rejoiceth in the truth*. Look at the verb. St Paul doesn't say 'apprehendeth' the truth, and he doesn't say 'abstracteth' the truth. He says **REJOICETH IN** the truth. You're more likely to perceive truth when you're surrounded by joyful living things like the sun, and sparrows, and melon-plants.

The presence of these living creatures will keep you from taking yourself too seriously. Their presence will also help you to see some piece of truth in a meaningful context. For its part Eichendorff's mill-wheel will teach you to ignore the soft-handed theoreticians, the ugly-minded jargonizers, and the clipboard-bearing commissars who regard heaven and earth through the clamantly rectangular lenses of their *I'm important* spectacles.

A garden should be a place of joyful illumination. Light is not created as an abstraction for earnest scholars to think about in their studies! According to Psalm 97. 11, *Light is sown for the righteous, and gladness for the upright in heart*. Light is **SOWN**. So is joy. Do you sow things on the floor of your study? No. You sow them on the soil of your garden. John 20. 15 tells us that Mary Magdalene supposed the Lord Jesus *to be the gardener*, and of course she was right. It was the Lord Jesus who said to a condemned criminal (Luke 23. 43), *Today shalt thou be with me in paradise* -- that is, in a Persian garden filled with trees, flowers, streams, fountains, and singing birds. The Creator of all these things is the true Light which has been **SOWN**. At the same time he is the heavenly manna which may be milled. God himself operates the mill, owns the barn, and gives away the meal.

Even now you're not completely awake. Somewhere on your tongue there lingers a rich bitter taste of Hawaiian coffee. In truth, you ate a magnificent breakfast: fresh lime juice, grapes, Spanish ham, porridge, Manx kippers, toast

and marmalade, plus six cups of coffee. Gratefully you recall how Rosie ground coffee-beans in the hand-mill. Then you think of a children's story called 'Why the Sea is Salt', in which a hand-mill is made to churn out coins of precious gold. Next you look at the cornflowers, and think of the composer Erich Wolfgang Korngold. That reminds you. God's *corn*-mill is also a *gold*-mill. The LORD can put humble corn into his mill, and grind it into meal of high quality.

Different pieces of Scripture flood your well-rested mind as you consider light, creation, manna, mills, corn, and precious gold. I John 1. 5: *God is light*. John 1. 9: *the true Light*. John 1. 3: *All things were made by him*. Numbers 11. 8: *the people went about, and gathered it, and ground it in mills*. Psalm 78. 24: *the corn of heaven*. I Kings 17. 14: *The barrel of meal shall not waste*. Job 23. 10: *when he hath tried me, I shall come forth as gold*. Matthew 13. 30: *gather the wheat into my barn*. John 12. 24: *Except a corn of wheat fall into the ground and die, it abideth alone*. Psalm 116. 15: *Precious in the sight of the LORD is the death of his saints*. For a third time you hear Wisdom speaking.

The effulgent Creator grinds down finely what is most precious.

Every plant in your garden looks blithe and merry. Are you losing your reason? No. You're thinking like a Biblical writer. Psalm 96. 12 says, *Let the field be joyful*. The soil of your field is being joyful because of what happened last night. During a lightning-storm the Creator 'grinds down' molecules of nitrogen into atoms that combine with oxygen atoms, transforming atmospheric nitrogen into nitrates upon which plants may feed. The rain that falls after a lightning-storm enriches the soil with well-diluted natural manure. Lightning is not something which disturbs the world's peace every so often. Lightning is part of the Creator's music. In other words, lightning is part of the ordered government of the universe. Psalm 77. 18 says, *The voice of thy thunder was in the heaven: the lightnings lightened the world*. Revelation 4. 5 says, *out of the throne proceeded lightnings and thunderings and voices: and there were seven lamps of fire burning before the throne*. Those seven lamps remind you of the tabernacle's lamps which had to be 'set in order' (Exodus 39. 37): *The pure candlestick, with the lamps thereof, even with the lamps to be set in order, and all the vessels thereof, and the oil for light*. God's bolts of lightning, which lighten the world, are no less 'set in order'. They always come at the right time, and they always come for a good reason. Exodus 19. 16 says, *it came to pass on the third day in the morning, that there were thunders and lightnings, and a thick cloud upon the mount*. Lightning really is part of the Creator's music. Exodus 20. 18 says, *all the people saw the thunderings, and the lightnings, and the noise of the trumpet*. Once again you hear the voice of Wisdom.

His music speaks in the lightning, setting things in order.

For a gardener, part of 'setting things in order' is dealing with weeds and suckers. For the LORD, part of 'setting things in order' is dealing with wickedness and sin. You think of Jericho, which Deuteronomy 34. 3 calls *the city of palm trees*. Joshua 6. 20 says, *it came to pass, when the people heard the sound of the trumpet, and the people shouted with a great shout, that the wall fell down flat, so that the people went up into the city, every man straight before him, and they took the city*. It was during the conquest of Jericho that the embryonic nation of Israel was born as a fighting force.

Of course Israel existed as a nation before Jericho. The life of an embryo is part of an overall unity. When you think of the embryonic melons which are already marching towards maturity in your greenhouse, and when you consider certain Scriptures, you're compelled to see what is called a 'foetus' as fully alive and fully human. In Luke 1. 15 Gabriel says of John the Baptist, *he shall be filled with the Holy Ghost, even from his mother's womb.* And in Luke 1. 42 Elisabeth says to the Virgin Mary, *blessed is the fruit of thy womb.* (Notice the tense of the implied verb. Blessed IS. Not blessed WILL BE.) Elisabeth's words 'the fruit of thy womb' refer to what some obstetricians might describe as a very young foetus. In the fullness of time, the Lord Jesus was

| | |
|---|---|
| <i>natus ex Maria Virgine,</i> | born of the Virgin Mary, |
| <i>passus sub Pontio Pilato,</i> | suffered under Pontius Pilate, |
| <i>crucifixus, mortuus, et sepultus;</i> | was crucified, died, and was buried, |
| <i>descendit ad inferos;</i> | he descended into hell: |
| <i>tertia die resurrexit a mortuis.....</i> | on the third day he rose again from the dead..... |

The words of Psalm 1. 3 apply perfectly to the Lord Jesus Christ: *he shall be like a tree planted by the rivers of water, that bringeth forth his fruit in his season.* For their part the words of John 12. 24 speak of what it cost the Lord Jesus to bring forth fruit. *Except a corn of wheat fall into the ground and die, it abideth alone; but if it die, it bringeth forth much fruit.* Acts 13. 33 tells us that God *hath raised up Jesus again; as it is also written in the second psalm, Thou art my Son, this day have I begotten thee.* The words 'this day' indicate not the day on which the Saviour was born, but the day on which he rose from the dead.

As you look at the maturing wallflowers, which will soon be in bloom, you realize that the Lord Jesus, who dealt mercifully with Zacchaeus and Bartimaeus in Jericho, is greater than Joshua. Partly through the agency of Joshua, the wall of Jericho *fell down flat.* Purely through the agency of God's Son, the wall which separated Jews and Gentiles has been *broken down.* Ephesians 2. 13-14 says, *But now in Christ Jesus ye who sometimes were far off are made nigh by the blood of Christ. For he is our peace, who hath made both one, and hath broken down the middle wall of partition between us.* In the peace of the garden you hear Wisdom speak once again.

A wall comes down when the embryo comes to fruition.

Music sounds in concert with the engine of a small car, and for a moment you feel like a remote beholder of events. Whatever is happening? Oh, yes. One of your neighbours has driven home for lunch with the windows down. You recognize a remarkable *Black* song which dates from 1986.

*Look at me standing
Here on my own again,
Up straight in the sunshine.*

*No need to run and hide:
It's a wonderful, wonderful life.
No need to laugh and cry:*

*It's a wonderful, wonderful life.
And I need a friend, oh I need a friend
To make me happy,
Not so alone.*

*Look at me here,
Here on my own again,
Up straight in the sunshine.*

*No need to run and hide:
It's a wonderful, wonderful life.
No need to laugh and cry:
It's a wonderful, wonderful life.
No need to run and hide:
It's a wonderful, wonderful life.
No need to run and hide:
It's a wonderful, wonderful life,
A wonderful life, wonderful life.....*

You feel sorry when the music stops and a car-door slams. 'Wonderful life' is not a bad song for the day in which you are alive. Even though your earthly life is fallen and flawed, it is truly wonderful. You have Rosie, your family, friends, a horse, a garden, trees, a pebble-bedded stream, birds that sing, a whole intoxicating creation to rejoice in, the sun, the wind, the rain, the lightning, useful work to do, books to read, music to play, sports, hobbies, interests, appetites, the ability to laugh and cry, the desire to breathe and run and swim, plus the one thing that gives permanent meaning to everything else.

What *is* that thing? Well, less than five minutes ago, Rosie was singing to Flame about it.

*I bind unto myself today
The strong name of the Trinity,
By invocation of the same,
The Three in One and One in Three.*

Several Scriptures come into your mind as you look around the garden. Genesis 22. 18: *in thy seed shall all nations of the earth be blessed.* Matthew 28. 19: *Go ye therefore, and teach all nations, baptizing them in the name of the Father, and of the Son, and of the Holy Ghost.* James 2. 23: *Abraham believed God, and it was imputed unto him for righteousness: and he was called the Friend of God.* John 15. 14: *Ye are my friends, if ye do whatsoever I command you.* John 14. 21: *He that hath my commandments, and keepeth them, he it is that loveth me: and he that loveth me shall be loved of my Father, and I will love him, and will manifest myself to him.* Revelation 3. 20: *Behold, I stand at the door, and knock: if any man hear my voice, and open the door, I will come in to him, and will sup with him, and he with me.* John 14. 23: *If a man love me, he will keep my words: and my Father will love him, and we will come unto him, and make our abode with him.* John 14. 16-17: *I will pray the Father, and he shall give you another Comforter, that he may abide with you for ever; Even the Spirit of truth.* Matthew 28. 20: *lo, I am with you alway, even unto the end of the world.* Hebrews 13. 5: *I*

will never leave thee, nor forsake thee. Proverbs 18. 24: *there is a friend that sticketh closer than a brother.* When at length you hear the voice of Wisdom, you realize that she is speaking both on her own behalf, and on yours.

The number three travels about with me as a friend.

Thinking of St Patrick's words *I bind unto myself*, you look at the honeysuckle which is binding itself around part of your privet hedge. In the border below the hedge there grows a little patch of wood sorrel. St Patrick is supposed to have used the three-leaved wood sorrel as a teaching aid when he was preaching about the Holy Trinity. At the base of the oak-tree grows a wild pansy. (Your trumpet-playing neighbour, who refers to his cypress-trees as *Ley-lànd-ee-ee*, insists on calling it *viola tricolor*.) In Shakespeare's time the wild pansy bore the name of *heartsease*, and so did a well-known piece of music by Anthony Holborne. You remember the request which Peter makes in *Romeo and Juliet*.

Musicians, O Musicians, Heartsease, Heartsease, O an you will have me live, play Heartsease.

Names are changeable things. Musicians still play *Heartsease* today, but they tend to call it *The Honeysuckle*.

Suddenly you give an enormous yawn. Rosie sees you, and bursts out laughing. She has sung her way right through 'St Patrick's Breastplate'. Silence reigns until Flame nudges your beloved gently with his head. The music-loving horse wants to hear another song. Rosie pulls his left ear. After a moment she begins to sing 'O thou that tellest good tidings to Zion'. While she sings, several verses from the Bible come into your mind. Isaiah 40. 9: *O Zion, that bringest good tidings, get thee up into the high mountain; O Jerusalem, that bringest good tidings, lift up thy voice with strength; lift it up, be not afraid; say unto the cities of Judah, Behold your God!* Isaiah 52. 7: *How beautiful upon the mountains are the feet of him that bringeth good tidings, that publisheth peace; that bringeth good tidings of good, that publisheth salvation; that saith unto Zion, Thy God reigneth!* Acts 3. 19: *Repent ye therefore, and be converted, that your sins may be blotted out, when the times of refreshing shall come from the presence of the Lord.* Philemon 20: *let me have joy of thee in the Lord: refresh my bowels in the Lord.* Proverbs 15. 30: *The light of the eyes rejoiceth the heart: and a good report maketh the bones fat.* Ill John 3: *For I rejoiced greatly, when the brethren came and testified of the truth that is in thee.* Rosie is mounting Flame. You look over at the wild pansy, whose name comes from the French word for 'thought' (*pensée*), and you think of the trumpet flowers that you saw last year when you were on a horse-riding holiday in Ecuador. It comes as no surprise to you when Wisdom speaks for a seventh time.

My heart draws refreshment from every herald of good news.

What exactly is 'good news'? It varies. You and I both spend a lot of time in the workshop and the garden, so we have our own ideas. Good news to a woodworker means getting second-hand tools and seasoned timber for nothing. Good news to a gardener means getting perennial plants and natural manure for nothing. Here's a bit of good news which you shared with Delia and me last week. Several vegetal beings have made their friendly way into your garden from

next door. One of these beings has three different names. You call it *moonflower*, while Rosie's father calls it *angel's trumpet*, but your neighbour calls it *datura innoxia*, and he grows it in a kind of *vesica piscis* flower-bed.

The fact that you got the moonflower for nothing reminds you of the gospel (Old English *gōd-spell* = good news), which costs the recipient nothing. Isaiah 55. 1: *Ho, every one that thirsteth, come ye to the waters, and he that hath no money; come ye, buy, and eat; yea, come, buy wine and milk without money and without price.* Of course the work of redemption cost our Redeemer his life. Exodus 15. 25: *the LORD shewed him a tree, which when he had cast into the waters, the waters were made sweet.* But the Redeemer rose again. He says in Revelation 1. 18, *I am he that liveth, and was dead; and, behold, I am alive for evermore.* You think of Job 14. 7-9: *For there is hope of a tree, if it be cut down, that it will sprout again, and that the tender branch thereof will not cease. Though the root thereof wax old in the earth, and the stock thereof die in the ground; Yet through the scent of water it will bud, and bring forth boughs like a plant.*

At the bottom of your garden, against a mortarless stone wall which Rosie, Delia, and I helped you to build last winter, grow the 'Watchman' hollyhocks. Fellow-gardeners often ask how you deal with hollyhock weevils. You answer them in terms of a complete garden, and explain that the liberal use of natural compost will help plants to withstand the attacks of pests.

Now that Rosie has mounted Flame, her head is well above the level that the 'Watchman' hollyhocks will reach when they're full-grown. Your beloved can see over the hedges. In fact, she can act as a watchman herself, like the mounted officer who in former times would lead a company of marching soldiers. Rosie is going to be rather active for the next hour or so. Flame is placid and well-behaved in the garden, but in the field he always reminds you of Job 39. 19. *Hast thou given the horse strength? hast thou clothed his neck with thunder?* On several occasions Flame has taken me for a twenty-minute gallop, and I ride something over fourteen stone. Today he brings to your mind one of the very greatest pieces of German literature, Rainer Maria Rilke's poem 'Ritter'.

*Reitet der Ritter in schwarzem Stahl
hinaus in die rauschende Welt.*

Rideth the rider in jet-black steel
out into the thunderous world.

Several Scriptures come hard on the heels of Rilke's rider. II Kings 4. 24: *Slack not thy riding for me, except I bid thee.* Job 41. 13: *who can come to him with his double bridle?* James 3. 2: *If any man offend not in word, the same is a perfect man, and able also to bridle the whole body.* Psalm 39. 1: *I will keep my mouth with a bridle.* Psalm 127. 1: *except the LORD keep the city, the watchman waketh but in vain.* Isaiah 21. 5-12: *Prepare the table, watch in the watchtower, eat, drink: arise, ye princes, and anoint the shield. For thus hath the LORD said unto me, Go, set a watchman, let him declare what he seeth. And he saw a chariot with a couple of horsemen, a chariot of asses, and a chariot of camels; and he hearkened diligently with much heed: And he cried, A lion: My lord, I stand continually upon the watchtower in the daytime, and I am set in my ward whole nights: And, behold, here cometh a chariot of men, with a couple of horsemen. And he answered and said, Babylon is fallen, is fallen; and all the graven images of her gods he hath broken unto the ground. O my threshing, and the corn of my floor: that which I have heard of the LORD of hosts, the God of Israel, have I declared unto you. The burden of Dumah. He calleth to me out of Seir,*

*Watchman, what of the night? Watchman, what of the night? The watchman said, The morning cometh, and also the night: if ye will enquire, enquire ye: return, come. O my threshing. You yawn helplessly. For a moment you wonder if you're going to lose consciousness, so you sit down on the garden seat. Are the Valkyries riding in the clouds above your head? No. But it seems to you that the universe is like a great complex living horse which has to be controlled. In Hebrews 1. 3 St Paul describes the Son of God as *upholding all things by the word of his power*, and Psalm 18. 10 David says of the LORD, *he rode upon a cherub*. As your neighbour begins to practise the *Posthorn Gallop*, you think of the angelic trumpeters in Revelation 8. 2. Wisdom speaks for an eighth time.*

The chief watchman uses his reins to exercise control.

You recall that the angel's trumpet, or moonflower, is a nocturnal bloomer, like the night-scented stock that grows in front of your house. Certain flowers actually *need* the darkness which they beautify. God has appointed them to give out their scent during the hours of darkness. That thought causes several Scriptures to come into your mind. Genesis 1. 2: *darkness was upon the face of the deep*. John 1. 1-5: *In the beginning was the Word, and the Word was with God, and the Word was God. The same was in the beginning with God. All things were made by him; and without him was not any thing made that was made. In him was life; and the life was the light of men. And the light shineth in darkness; and the darkness comprehended it not*. John 13. 27: *And after the sop Satan entered into him. Then said Jesus unto him, That thou doest, do quickly*. John 13. 30: *He then having received the sop went immediately out: and it was night*. Luke 22. 53: *this is your hour, and the power of darkness*. Matthew 27. 45: *Now from the sixth hour there was darkness over all the land unto the ninth hour*. Isaiah 60. 2: *For, behold, the darkness shall cover the earth, and gross darkness the people: but the LORD shall arise upon thee, and his glory shall be seen upon thee*. II Samuel 22. 29: *the LORD will lighten my darkness*. Psalm 18. 11: *He made darkness his secret place*. Isaiah 45. 7: *I form the light, and create darkness*. Exodus 10. 22: *Moses stretched forth his hand toward heaven; and there was a thick darkness in all the land of Egypt three days*. Deuteronomy 5. 22: *These words the LORD spake unto all your assembly in the mount out of the midst of the fire, of the cloud, and of the thick darkness, with a great voice*. Isaiah 45. 18: *For thus saith the LORD that created the heavens; God himself that formed the earth and made it; he hath established it, he created it not in vain, he formed it to be inhabited: I am the LORD*. Psalm 139. 12: *the darkness hideth not from thee; but the night shineth as the day: the darkness and the light are both alike to thee*. Isaiah 45. 3: *I will give thee the treasures of darkness*. God controls the darkness, and brings good things out of it. As you think of moonflowers and night-scented stock, Wisdom speaks for a ninth time.

The word establishes the darkness by its own will.

Here is a wonderful fact. The Governor of the universe is lovingly interested in each one of his creatures. Psalm 147. 4 says, *He telleth the number of the stars; he calleth them all by their names*. Whoever wrote Psalm 148. 3b -- *praise him, all ye stars of light* -- can address the universal choir of individual stars, but God can address each stellar chorister personally. Every star has a job. To some if not all of the stars God has given the job of affecting the outcome of earthly

events. You recall what the LORD himself says in Job 38. 31-32. *Canst thou bind the sweet influences of Pleiades, or loose the bands of Orion? Canst thou bring forth Mazzaroth in his season? or canst thou guide Arcturus with his sons?* You also recall what Deborah sings in Judges 5. 20. *They fought from heaven; the stars in their courses fought against Sisera.* Good weather can spell success for a farmer. Bad weather can spell defeat for a general. (Of course the sun and the moon have their own jobs to do. Moses talks in Deuteronomy 33. 14 about *the precious fruits brought forth by the sun.* He also talks about *the precious things put forth by the moon.*)

‘This is very dangerous talk,’ says Seth Prodie, a pharisaical church elder of sorts. ‘I do not know why you feel obliged to quote any of those verses about the stars.’ He pauses. ‘Do you believe that the Pleiades have sweet influences?’

Yes, you reply. Almighty God tells us that they do.

‘And do you believe that the stars can fight against a person who lives on earth?’

Yes, you answer. Deborah tells us that they do.

Die Vögelein schweigen. The sparrows have stopped singing.

‘I deplore – I *deeply* deplore – the direction in which you are heading,’ declares Seth Prodie. ‘I have said nothing about your unspiritual horticultural ORGY. What can plants and flowers tell us about human sinfulness? But leave that matter for the present. I am impelled to warn you that your use of Scripture is calculated to mislead the godly. You have perversely chosen to focus on the very verses which I would love to remove from the Bible. Surely you realize that some parts of the Bible are, to say the least, highly poetic! These poetic parts are not at all important. You would do better, I feel, to concern yourself with serious matters like righteousness and sanctification. Do people really need to know about one of the Psalmists talking to the stars? Or about God riding on a cherub?’ He pauses. ‘I am still very angry with that worldly actress who quoted from Psalm 78 in chapter 11. *Then the Lord awaked as one out of sleep, and like a mighty man that shouteth by reason of wine.*’

You are astonished. After thinking for a while, you ask Seth Prodie to answer seven questions.

Did Miss Benn do wrong when she quoted part of Psalm 78? Did Asaph do wrong when he wrote Psalm 78? Did Deborah do wrong when she spoke about the stars fighting in their courses? Did the LORD do wrong when he spoke about the sweet influences of the Pleiades? Did the author of Psalm 148 do wrong when he told all the stars to praise the LORD? Did David do wrong when he said that the LORD rode upon a cherub? Does the LORD do wrong when he actually rides upon a cherub?

Seth Prodie glares like a Gorgon, and refuses to answer you.

Highly poetic! Who is this that darkeneth counsel by words without knowledge? Let me break in here. Only an implacable enemy of God wants to delete pieces of God’s Word. And only an illiterate barbarian uses the word *poetic* to mean ‘not

true'. Seth Prodie should read the great Tamil classic *Tirukkura!*, which was composed by Thiruvalluvar. Listen to couplet 401.

அரங்கின்றி வட்டாடி யற்றே நிரம்பிய
நூலின்றிக் கோட்டி கொளல்.

*If you presume to address a group of people when you are ignorant,
You are moving your chessmen about on a squareless board.*

Those who desire to bowdlerize the Bible are self-important idolaters. They need a god whom they can keep in a drawer.

'*Delicately fashioned is my lord,*' they say. 'We can't have stars fighting in their courses, we can't have God riding about on a cherub, and we can't have a mighty man shouting by reason of wine. There are certain things in the Bible which should be allowed neither to distress the pious, nor to disturb the dull.'

People should be AFRAID to delete any part of God's Word. You remember Jeremiah 36. 21-24. *So the king sent Jehudi to fetch the roll: and he took it out of Elishama the scribe's chamber. And Jehudi read it in the ears of the king, and in the ears of all the princes which stood beside the king. Now the king sat in the winterhouse in the ninth month: and there was a fire on the hearth burning before him. And it came to pass, that when Jehudi had read three or four leaves, he cut it with the penknife, and cast it into the fire that was on the hearth, until all the roll was consumed in the fire that was on the hearth. Yet THEY WERE NOT AFRAID, nor rent their garments, neither the king, nor any of his servants that heard all these words.*

When a person says that he would love to remove certain verses from the Bible, he becomes the partner of Jehudi.

Seth Prodie is one of those unlearned and unstable persons who 'wrest the Scriptures', as St Peter says, 'unto their own destruction'.

He effectively *mutilates the Bible* so that he may create a dark and joyless god in his own miserable image.

Then he teaches his quivering brethren and sisters to worship the dark and joyless god whom he has created.

Here is a law of ecclesial life. Any church that worships a dark and joyless god will soon become a gloomy spiritual prison.

Whenever I hear of such a church, I want to shout the words of Walt Whitman.

*Beat! Beat! Drums! -- Blow! Bugles! Blow!
Through the windows -- through doors -- burst like a ruthless force,
Into the solemn church, and scatter the congregation;
Into the school where the scholar is studying.....*

*Beat! Beat! Drums! -- Blow! Bugles! Blow!
Make no parley -- stop for no expostulation;
Mind not the timid.....*

MIND NOT THE TIMID. According to Revelation 21. 8, the fearful and the unbelieving will have their part in the lake which burneth with fire and brimstone.

Do some losers accept a mutilated Bible on their own timorous terms? Christians accept the Bible intrepidly as a complete package. You recall Deuteronomy 8. 3: *man doth not live by bread only, but by EVERY WORD that proceedeth out of the mouth of the LORD doth man live.* The Lord Jesus Christ quoted that Scripture to Satan (Matthew 4. 3-4). *And when the tempter came to him, he said, If thou be the Son of God, command that these stones be made bread. But he answered and said, It is written, Man shall not live by bread alone, but by EVERY WORD that proceedeth out of the mouth of God.*

Are you getting the message?

EVERY WORD.

(The sweet influences of the Pleiades. The stars fighting in their courses. A mighty man shouting. Riding upon a cherub.)

EVERY WORD.

Now let me ask a question that Seth Prodie should have asked long ago. Why does the LORD ride about upon a cherub? Well, there may be several reasons. Here is one. *BECAUSE HE LIKES IT.*

Almighty God is not a housebound collector of abstract nouns. He fights, he laughs, and he sings.

Exodus 15. 3: The LORD is a man of war.

Psalm 2. 4: He that sitteth in the heavens shall laugh.

Zephaniah 3. 17: The LORD thy God in the midst of thee is mighty; he will save, he will rejoice over thee with joy; he will rest in his love, he will joy over thee with singing.

Almighty God is zealous, or enthusiastic. (II Kings 19. 31: *the zeal of the LORD of hosts shall do this.* Isaiah 9. 7: *The zeal of the LORD of hosts will perform this.*)

For his part the Lord Jesus Christ is characterized by zeal, or enthusiasm. (Psalm 69. 9, cited in John 2. 17: *The zeal of thine house hath eaten me up.*)

Whenever you think about the enthusiasm of God, you want to start running over the hills, like the person whom Horace describes in *Odes III. 25.*

non secus in iugis

*exsomnis stupet Euhias,
Hebrum prospiciens et nive candidam
Thracen ac pede barbaro
lustratam Rhodopen*

(= in the same state of mind the sleepless Maenad stops in amazement on the mountain-top as she looks across at Hebrus, and at Thrace, white with snow, and at Rhodope, trodden by foreign feet).

The thought of a snow-covered Thrace leads you to remember Li Bai's utterly intoxicating 'Song of Lu Mountain'.

登 高 壯 觀 天 地 間

(= I climb to a great height. I see sky, earth, and all between).....

白 波 九 道 流 雪 山

.....(= White streams flow along nine paths from the snow-clad mountain).

'You are quoting from two pagan poets!' says Seth Prodie in horror.

Indeed you are, and you have a good precedent for doing so. St Paul quoted from a number of pagan poets when he was addressing the Athenians.

'Paul should not have done that!' says Seth Prodie.

Should he not? Do you want to keep people out of heaven? Read Acts 17. 34.

When St Paul quoted from pagan poets, *certain men clave unto him, and BELIEVED: among the which was Dionysius the Areopagite, and a woman named Damaris, and others with them.*

Seth Prodie walks away like an elderly monitor lizard. Maybe in his heart he is reciting a famous line of the Armenian poet Yeghishe Charents:

Չյունաապատ լեռներ ու կապույտ լճեր

(= Snow-clad mountains and blue lakes).

Or maybe not. Whatever the case, the sparrows have resumed their singing.

You recall four words from Nabokov's story 'Cloud, Castle, Lake': *the sparrows were cheerful.*

Then you remember the final anagram-sentence of *Transparent Things*, in which Nabokov shows the hero of his novel passing through death, waking to new life, and meeting a dear one from the previous life.

Easy, you know, does it, son. [= I see snow, sky, and you, too.]

In the house next door, your neighbour's daughter raises the lacquered wing of her old Bechstein piano, and begins to play the music of a harvest hymn.

*We plough the fields, and scatter the good seed on the land,
But it is fed and watered by God's almighty hand;
He sends the snow in winter, the warmth to swell the grain,
The breezes and the sunshine, and soft refreshing rain.*

Different Scriptures flow into your mind along with the words of Matthias Claudius and the music of Johann Abraham Peter Schulz. Job 38. 22: *Hast thou entered into the treasures of the snow?* Amos 5. 8: *Seek him that maketh the seven stars and Orion.* Revelation 1. 14: *His head and his hairs were white like wool, as white as snow.* Revelation 1. 16: *he had in his right hand seven stars.* Revelation 22. 16: *I Jesus have sent mine angel to testify unto you these things*

in the churches. I am the root and the offspring of David, and the bright and morning star. Isaiah 45. 8: Drop down, ye heavens, from above, and let the skies pour down righteousness: let the earth open, and let them bring forth salvation, and let righteousness spring up together; I the LORD have created it. Exodus 3. 8: I am come down to deliver. Numbers 24. 17: there shall come a Star out of Jacob. Matthew 2. 10: When they saw the star, they rejoiced with exceeding great joy. Isaiah 52. 13: Behold, my servant shall deal prudently, he shall be exalted and extolled, and be very high. Luke 1. 32: He shall be great, and shall be called the Son of the Highest. I Corinthians 13. 10: when that which is perfect is come, then that which is in part shall be done away. James 1. 17: Every good gift and every perfect gift is from above, and cometh down from the Father of lights.

*Alle gute Gabe
kommt her von Gott dem Herrn,
drum dankt ihm, dankt,
drum dankt ihm, dankt,
und hofft auf ihn.*

*All good gifts around us
Are sent from heaven above:
Then thank the Lord,
O thank the Lord
For all His love.*

John 8. 6: Jesus stooped down, and with his finger wrote on the ground. Hebrews 2. 10: For it became him, for whom are all things, and by whom are all things, in bringing many sons unto glory, to make the captain of their salvation perfect through sufferings. Matthew 5. 48: Be ye therefore perfect, even as your Father which is in heaven is perfect. Hebrews 10. 14: For by one offering he hath perfected for ever them that are sanctified. Psalm 85. 11-12: Truth shall spring out of the earth; and righteousness shall look down from heaven. Yea, the LORD shall give that which is good; and our land shall yield her increase. From a bed of golden asters, Wisdom speaks for a tenth time.

The exalted star stoops down in perfection.

It is altogether right that these words should be spoken in a garden. The Lord Jesus, the bright and morning STAR, is also the ROOT of David. Different Scriptures come into your mind as you notice the rhubarb-crowns. Isaiah 53. 2: he shall grow up before him as a tender plant, and as a root out of a dry ground. Job 38. 37-38: Who can number the clouds in wisdom? or who can stay the bottles of heaven, When the dust groweth into hardness, and the clods cleave fast together? Psalm 67. 5-6: Let the people praise thee, O God; let all the people praise thee. Then shall the earth yield her increase; and God, even our own God, shall bless us. Song of Solomon 2. 13: The fig tree putteth forth her green figs, and the vines with the tender grape give a good smell. Genesis 40. 10: in the vine were three branches: and it was as though it budded, and her blossoms shot forth; and the clusters thereof brought forth ripe grapes. Ezekiel 17. 7: There was also another great eagle with great wings and many feathers: and, behold, this vine did bend her roots toward him, and shot forth her branches toward him, that he might water it by the furrows of her plantation. John 15. 1-8: I am the true vine, and my Father is the husbandman. Every branch in me that beareth not fruit he taketh away: and every branch that beareth fruit, he purgeth it, that it may bring forth more fruit. Now ye are clean through the word which I have spoken unto you. Abide in me, and I in you. As the branch cannot bear fruit of itself, except it abide in the vine; no more can ye, except ye abide in me. I

am the vine, ye are the branches: He that abideth in me, and I in him, the same bringeth forth much fruit: for without me ye can do nothing. If a man abide not in me, he is cast forth as a branch, and is withered; and men gather them, and cast them into the fire, and they are burned. If ye abide in me, and my words abide in you, ye shall ask what ye will, and it shall be done unto you. Herein is my Father glorified, that ye bear much fruit; so shall ye be my disciples. Mark 4. 8: And other fell on good ground, and did yield fruit that sprang up and increased, and brought forth, some thirty, and some sixty, and some an hundred. Mark 4. 20: And these are they which are sown on good ground; such as hear the word, and receive it, and bring forth fruit, some thirtyfold, some sixty, and some an hundred. Acts 14. 15-17: turn from these vanities unto the living God, which made heaven, and earth, and the sea, and all things that are therein: Who in times past suffered all nations to walk in their own ways. Nevertheless he left not himself without witness, in that he did good, and gave us rain from heaven, and fruitful seasons, filling our hearts with food and gladness. Deuteronomy 32. 13: He made him ride on the high places of the earth, that he might eat the increase of the fields; and he made him to suck honey out of the rock, and oil out of the flinty rock. Wisdom moves to the vegetable beds, and speaks once again.

Increase ripens in the earthen clods of the furrows.

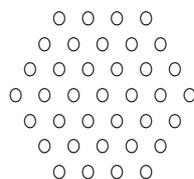
True increase ripens when people follow the Maker's instructions. But in many parts of the world, the agriculture that was once called 'husbandry' is now called 'industry'. The land has been poisoned with chemical powders. Herbivorous animals have been turned into cannibals. When you realize that both plants and animals have recently been afflicted with plagues, you find different Scriptures coming into your mind. Joel 1. 17-20: *The seed is rotten under their clods, the garners are laid desolate, the barns are broken down; for the corn is withered. How do the beasts groan! The herds of cattle are perplexed, because they have no pasture; yea, the flocks of sheep are made desolate. O LORD, to thee will I cry: for the fire hath devoured the pastures of the wilderness, and the flame hath burned all the trees of the field. The beasts of the field cry also unto thee: for the rivers of waters are dried up, and the fire hath devoured the pastures of the wilderness. Habakkuk 3. 17-18: Although the fig tree shall not blossom, neither shall fruit be in the vines; the labour of the olive shall fail, and the fields shall yield no meat; the flock shall be cut off from the fold, and there shall be no herd in the stalls: Yet I will rejoice in the LORD, I will joy in the God of my salvation. Psalm 80. 14-15: Return, we beseech thee, O God of hosts: look down from heaven, and behold, and visit this vine; And the vineyard which thy right hand hath planted. Luke 20. 9-16: A certain man planted a vineyard, and let it forth to husbandmen, and went into a far country for a long time. And at the season he sent a servant to the husbandmen, that they should give him of the fruit of the vineyard: but the husbandmen beat him, and sent him away empty. And again he sent another servant: and they beat him also, and entreated him shamefully, and sent him away empty. And again he sent a third: and they wounded him also, and cast him out. Then said the lord of the vineyard, What shall I do? I will send my beloved son: it may be they will reverence him when they see him. But when the husbandmen saw him, they reasoned among themselves, saying, This is the heir: come, let us kill him, that the inheritance may be ours. So they cast him out of the vineyard, and killed him. What therefore shall the lord of the vineyard do unto them? He shall come and destroy these husbandmen, and shall give the*

vineyard to others. Isaiah 5. 5: I will tell you what I will do to my vineyard: I will take away the hedge thereof, and it shall be eaten up; and break down the wall thereof, and it shall be trodden down. Psalm 2. 9: Thou shalt break them with a rod of iron; thou shalt dash them in pieces like a potter's vessel. Psalm 2. 1: Why do the heathen rage, and the people imagine a vain thing? Isaiah 65. 2: I have spread out my hands all the day unto a rebellious people. Psalm 58. 7: Let them melt away as waters which run continually.

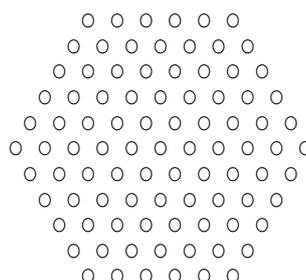
The vanity of rebellion will dissolve into liquid, which God will employ for his own creative purpose. Genesis 1. 2: *darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters. Psalm 74. 13: thou brakest the heads of the dragons in the waters. II Peter 3. 5: by the word of God the heavens were of old, and the earth standing out of the water and in the water. Wisdom speaks for a twelfth time.*

Vain rebellion melts into water.

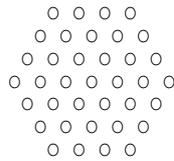
The vegetal and animal creation will come to fight against rebellious destroyers of the earth. II Samuel 18. 8-9: *the wood devoured more people that day than the sword devoured. And Absalom met the servants of David. And Absalom rode upon a mule, and the mule went under the thick boughs of a great oak, and his head caught hold of the oak, and he was taken up between the heaven and the earth; and the mule that was under him went away. Revelation 11. 15: the seventh angel sounded; and there were great voices in heaven, saying, The kingdoms of this world are become the kingdoms of our Lord, and of his Christ; and he shall reign for ever and ever. Revelation 19. 17-18: I saw an angel standing in the sun; and he cried with a loud voice, saying to all the fowls that fly in the midst of heaven, Come and gather yourselves together unto the supper of the great God; That ye may eat the flesh of kings, and the flesh of captains, and the flesh of mighty men. Psalm 74. 14: Thou brakest the heads of leviathan in pieces, and gavest him to be meat to the people inhabiting the wilderness. The Hebrew word rendered 'to be meat', mem-aleph-kaph-lamedh, adds up in 22 gematria to thirty-seven (the centred hexagonal number of four).....*



..... and in 400 gematria to ninety-one (the centred hexagonal number of six).



Each number reminds you of a honeycomb. What was the 'leviathan' of Psalm 74. 14? Well, it appears to have been a kind of comet. Instead of crashing into the earth at the time of the Exodus, this comet was compelled to go into orbit around the periphery of the earth's atmosphere, like a Uranian ring. Its component materials were converted into the sugar-rich 'corn of heaven' which fell to earth over a forty-year period. (Exodus 16. 31: *the house of Israel called the name thereof Manna: and it was like coriander seed, white; and the taste of it was like wafers made with honey.*) Sweetness in the Bible is sometimes associated with the defeat or the death of strong ones. Psalm 78. 25: *Man did eat angels' food* [= food MADE FROM the strong ones: compare Psalm 74. 14]; *he sent them meat to the full.* The Hebrew word rendered 'meat' is spelled tzaddi-yodh-daleth-he, and it has a 22 gematric value of thirty-seven.



Centred hexagonal numbers also appear in the story of Samson. (Judges 14. 8: *And after a time he returned to take her, and he turned aside to see the carcase of the lion: and, behold, there was a swarm of bees and honey in the carcase of the lion.* Judges 14. 14: *Out of the eater came forth meat, and out of the strong came forth sweetness.*) The sixty-one Hebrew letters which make up Judges 14. 8 in the Aleppo Codex.....

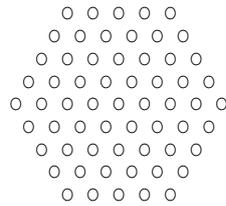
מ ב ש י ו
 ק ל ם י מ י
 ר ס י ו ה ת ח
 מ ת א ת ו א ר ל
 ו ה י ר א ה ת ל פ
 ב ד ת ד ע ה נ ה
 ו ג ב ם י ר ו
 י ר א ה ת י
 ש ב ד ו ה

.....may be arranged so as to depict the centred hexagonal number of five.

For its part the Hebrew word in Judges 14. 14 which is rendered 'meat', mem-aleph-kaph-lamedh, adds up in 22 gematria to thirty-seven, and in 400 gematria to ninety-one.

Isaiah 7. 15 contains an important prophecy about the virgin-born Messiah: *and honey shall he eat.*

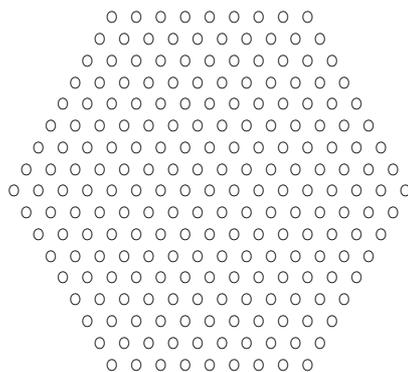
The Hebrew word rendered ‘shall he eat’ is spelled yodh-aleph-kaph-lamedh, and it adds up in 400 gematria to sixty-one.



Isaiah’s prophecy is fulfilled in Luke 24. 42, when the risen Lord Jesus eats *a piece of a broiled fish, and of an honeycomb* (ἰχθυος οπτου μερος και απο μελισσιου κηριου). The seven Greek words, set out in upper-case letters, may be arranged in accordance with the structure of a centred hexagonal number.

Ι Χ Θ Υ
 Ο Σ Ο Π Τ
 Ο Υ Μ Ε Ρ Ο
 Σ Κ Α Ι Α Π Ο
 Μ Ε Λ Ι Σ Σ
 Ι Ο Υ Κ Η
 Ρ Ι Ο Υ

In 800 Greek gematria the verse adds up to 6944, which is a piece of mathematical honeycomb in its own right, being thirty-two times the centred hexagonal number of nine.



Two hundred and seventeen (the centred hexagonal number of nine)

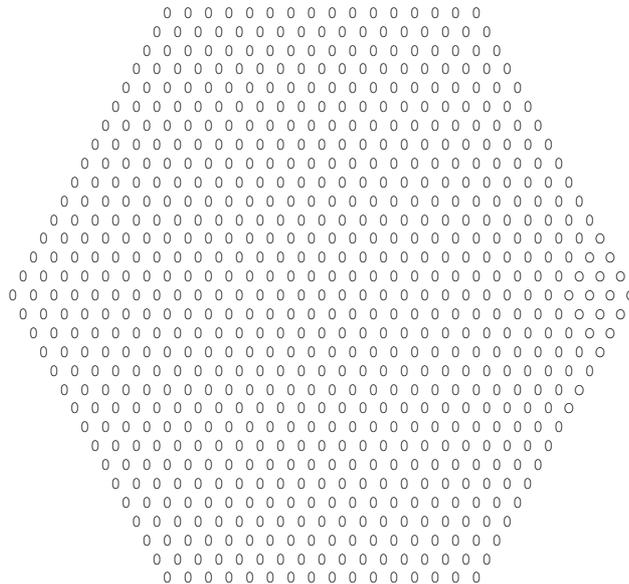
Two hundred and seventeen happens to be the 400 gematric value of the Hebrew word for ‘bee’ (daleth-beth-wau-resheh).

The Hebrew word for ‘bee’ has a 22 gematric value of thirty-seven.

By eating honeycomb, the Lord Jesus shows that he has defeated his enemies. He has won.

They compassed me about like bees; they are quenched as the fire of thorns: for in the name of the LORD I will destroy them.

St Luke has more reason than most people to be interested in centred hexagonal numbers. In 800 Greek gematria the name of Luke (lambda-omicron-upsilon-kappa-alpha-sigma) adds up to seven hundred and twenty-one, which is the centred hexagonal number of sixteen.



All over the world, bees are harvesting nectar which they will turn into honey.

All over the world, plants are turning water, carbon dioxide, and sunlight into carbohydrates like sucrose and starch. They are also breaking the heads of the water-dragon so as to produce oxygen.

One of your friends manures his leeks with a mixture of soot and water. It's hard to believe, when you watch him making up the filthy black mixture in a bucket, that soot and water contain the three elements of sugar (carbon, hydrogen, and oxygen). The rings of Uranus may turn out to have a similar composition.

Sugar comes from the soil. Your cousin in Louisiana owns a sugar-cane plantation. Closer to home, a couple of miles from where you live, a small field of sugar-beet hides at the edge of a forest. That field is owned by a farmer who belongs to your church. Three months ago he gave you a sugar-beet plant to which you assigned a place of honour in one corner of the greenhouse.

The Irish Republic's eight decades of sugar-beet cultivation came to a sorrowful end in 2006. Furthermore, at the time of writing (2011) a large part of the English sugar-beet crop has been ruined by unfriendly weather. Your farmer friend is not an anti-GM activist, but he believes that the combination of GM beet, herbicide, and artificial manure has been bad for the soil, bad for humans, and bad for skylarks. He feeds his own fields with vegetable compost and well-rotted animal manure. (His animals enjoy a diet which includes no antibiotics.) Although your friend is not wealthy, he and his family lack nothing. It's funny. I often meet small farmers who claim to be ruined, and they all bear the same burden. The big minibus-jeps which they need for their work have an average value of \$55,000. (Away from the land, I often meet academics who claim that the British universities are ruined. Well, of course they are. Instead of supporting the study of real subjects like Arabic, Chinese, German, ancient Greek, Latin, Russian, and Sanskrit, many British universities are nourishing enormous and utterly useless

TAPEWORM-DEPARTMENTS of education, psychology, and sociology. At the same time they insist on treating every squalid form of Loser Studies with lunatic seriousness. You reap what you sow. Having poisoned much of their own soil, the universities are producing sickly deviant plants.)

Few people who visit your greenhouse realize how much sweetness your sugar-beet plant contains. You think of several verses. Isaiah 53. 2: *For he shall grow up before him as a tender plant, and as a root out of a dry ground.* Isaiah 11. 1: *there shall come forth a rod out of the stem of Jesse, and a Branch shall grow out of his roots.* Isaiah 11. 10: *in that day there shall be a root of Jesse, which shall stand for an ensign of the people; to it shall the Gentiles seek: and his rest shall be glorious.* Romans 11. 16: *if the root be holy, so are the branches.* II Kings 19. 30: *the remnant that is escaped of the house of Judah shall yet again take root downward, and bear fruit upward.* Once more Wisdom speaks.

The root growing in solitude is filled with honey.

Judges 6. 11: *there came an angel of the LORD, and sat under an oak which was in Ophrah, that pertained unto Joash the Abiezrite: and his son Gideon threshed wheat by the winepress.* Genesis 41. 46-49: *Joseph was thirty years old when he stood before Pharaoh king of Egypt. And Joseph went out from the presence of Pharaoh, and went throughout all the land of Egypt. And in the seven plenteous years the earth brought forth by handfuls. And he gathered up all the food of the seven years, which were in the land of Egypt, and laid up the food in the cities: the food of the field, which was round about every city, laid he up in the same. And Joseph gathered corn as the sand of the sea, very much, until he left numbering; for it was without number.* Luke 1. 32: *He shall be great, and shall be called the Son of the Highest.* Isaiah 19. 20: *he shall send them a saviour, and a great one, and he shall deliver them.* Genesis 49. 27: *in the morning he shall devour the prey, and at night he shall divide the spoil.* Isaiah 53. 12: *he shall divide the spoil with the strong.* Job 27. 17: *the innocent shall divide the silver.* Revelation 14. 15: *the harvest of the earth is ripe.* Revelation 14. 18: *gather the clusters of the vine of the earth; for her grapes are fully ripe.* Matthew 9. 38: *Pray ye therefore the Lord of the harvest, that he will send forth labourers into his harvest.* Boaz in Ruth 2. 1 is described as *a mighty man of wealth.* Ruth 2. 23: *she kept fast by the maidens of Boaz to glean unto the end of barley harvest and of wheat harvest.* In Ruth 3. 15 Boaz says to Ruth, *Bring the vail that thou hast upon thee, and hold it. And when she held it, he measured six measures of barley, and laid it on her.* Wisdom speaks for a fourteenth time.

The great one divides up the wealth of ripeness.

Dreamily you perceive that seven words from Ruth 3. 15 – *And when she held it, he measured six measures* – contain thirty-seven letters.

A N D W
H E N S H
E H E L D I
T H E M E A S
U R E S S I
X M E A S
U R E S

Then you hear the urbane percussive music of iron shoes on a tree-lined road.

The centred hexagonal number of four is made up of seven rows which contain respectively four, five, six, seven, six, five, and four pebbles. Your beloved has ridden Flame in accordance with the structure of that centred hexagonal number: walk, trot, canter, gallop, canter, trot, walk. Riding is a discipline, not a pursuit.

Now the rider is bending down so as to reach you a slip of paper. 'Here's a specimen of the *Yakut* language,' she says. 'Translate it.' When you look at the fourth and seventh words, you find yourself able to obey Rosie's command.

Айхаллааһ Кинини лыҕкынас кимвалларынан,
айхаллааһ кишкинэс кимвалларынан.

By the time your beloved comes out of the stable, you have made Wisdom's fourteen speeches into a kind of poem.

THE SONG OF WISDOM

Where am I? Seek within the melon.

The strong one runs to and fro, dividing up his household.

The effulgent Creator grinds down finely what is most precious.

His music speaks in the lightning, setting things in order.

A wall comes down when the embryo comes to fruition.

The number three travels about with me as a friend.

My heart draws refreshment from every herald of good news.

The chief watchman uses his reins to exercise control.

The word establishes the darkness by its own will.

The exalted star stoops down in perfection.

Increase ripens in the earthen clods of the furrows.

Vain rebellion melts into water.

The root growing in solitude is filled with honey.

The great one divides up the wealth of ripeness.

Before taking a token lunch of grapes and green tea, you arrange the poem's 576 letters in the form not of a square, but of a heraldic lozenge.

'That lozenge could almost be Wisdom's coat of arms,' says Rosie. You recall that your beloved has made rather a study of heraldry.

Listen! *The shields of the earth belong unto God.* Every one of those shields is related to LANGUAGE. By contrast, the *vesica piscis* looks like nothing on earth, and it has nothing whatever to say. (Many male and female occultist authors claim to discern in the *vesica piscis* particular pieces of male and female human anatomy. These authors must all be hideously deformed. Taint not thy mind!) Occult symbols that are generated by compass and ruler may exercise power for a while, but their power is irrational, and whenever it is exercised it leads to destruction. The veneration of a symbol represents the degeneration of reason. So does the veneration of an idea. Health is to say what David says in Psalm 18: *I will love thee, O LORD, my strength.* Life is to know the only true God, and Jesus Christ whom he has sent. Remember: the LORD gave the *word* -- not a symbol, and not an idea. What people call 'sacred geometry' has nothing to do with the only true God. Forget about the *vesica piscis* and the Flower of Life. Read the Bible! Leave the creation of Spirograph patterns to De La Rue plc.

W
 H E
 R E A
 M I S E
 E K W I T
 H I N T H E
 M E L O N T H
 E S T R O N G O
 N E R U N S T O A
 N D F R O D I V I D
 I N G U P H I S H O U
 S E H O L D T H E E F F
 U L G E N T C R E A T O R
 G R I N D S D O W N F I N E
 L Y W H A T I S M O S T P R E
 C I O U S H I S M U S I C S P E
 A K S I N T H E L I G H T N I N G
 S E T T I N G T H I N G S I N O R D
 E R A W A L L C O M E S D O W N W H E
 N T H E E M B R Y O C O M E S T O F R U
 I T I O N T H E N U M B E R T H R E E T R
 A V E L S A B O U T W I T H M E A S A F R I
 E N D M Y H E A R T D R A W S R E F R E S H M
 E N T F R O M E V E R Y H E R A L D O F G O O D
 N E W S T H E C H I E F W A T C H M A N U S E
 S H I S R E I N S T O E X E R C I S E C O N
 T R O L T H E W O R D E S T A B L I S H E
 S T H E D A R K N E S S B Y I T S O W N
 W I L L T H E E X A L T E D S T A R S
 T O O P S D O W N I N P E R F E C T
 I O N I N C R E A S E R I P E N S
 I N T H E E A R T H E N C L O D
 S O F T H E F U R R O W S V A
 I N R E B E L L I O N M E L
 T S I N T O W A T E R T H
 E R O O T G R O W I N G
 I N S O L I T U D E I
 S F I L L E D W I T
 H H O N E Y T H E
 G R E A T O N E
 D I V I D E S
 U P T H E W
 E A L T H
 O F R I
 P E N
 E S
 S

Figurate art: 'The Song of Wisdom' set out as a heraldic lozenge

CHAPTER 21: THEY WERE NOT DIVIDED

And will she yet abase her eyes on me,
That cropp'd the golden prime.....

William Shakespeare, *King Richard III*

.....the birds divided he not.

Genesis 15. 10

The King burst out into a Laughture.....

Great Britain's Honeycombe

Yesterday a certain art college held its annual Judgment of Osiris. Every final-year student was asked to exhibit a borrowed piece of someone else's art. An Australian student called Julia Arden happened to borrow guess what picture from Lettuce Girl. In the afternoon five members of staff pronounced expertly upon each of the exhibits. Julia was praised for being 'fearless enough to look great wickedness in the face'. Then it got even better. What Lettuce Girl's aunt had called 'the perfectly chaste painting of a perfectly chaste girl' was declared to be 'a scopophilic orgy', 'a work of unutterable evil', 'a sick Victorian fantasy of virgineal rapture', 'a blazing adolescent romp', and 'the creation of a vicious male exploiter'. One lecturer called Grace Prentice is known as Grace Prendergast because she contrives to employ the *race-gender-class* mouthful in every third or fourth sentence. Grace addressed her lady students with preternatural solemnity. 'If the painter of that nympholeptic candy-floss ever gets into an elevator with you,' she said, 'you should immediately get out, take the stairs, and contact the police.' Ten minutes ago Lettuce Girl told us the tale.

No more laughture. Back to work! Look at the first eleven words of Genesis 2. 9.

ויצמח יהוה אלהים מן האדמה
כל עץ נחמד למראה וטוב למאכל

(= And out of the ground made the LORD God to grow
every tree that is pleasant to the sight, and good for food.....).

In addition to meaning what they mean and stating a historical fact, these words encode a considerable amount of lore relating to the PRIME NUMBERS.

A prime number (or 'prime') is evenly divisible only by itself and one. Here are the first forty primes:

2, 3, 5, 7, 11, 13, 17, 19, 23, 29,
31, 37, 41, 43, 47, 53, 59, 61, 67, 71,
73, 79, 83, 89, 97, 101, 103, 107, 109, 113,
127, 131, 137, 139, 149, 151, 157, 163, 167, 173.

We speak of two as ‘the first prime’, of three as ‘the second prime’, of five as ‘the third prime’, and so on. In abbreviated language 2 = p1, 3 = p2, and 5 = p3. I’ll set out below the first forty primes together with their rank numbers.

p1 = 2, p2 = 3, p3 = 5, p4 = 7, p5 = 11, p6 = 13, p7 = 17, p8 = 19,
 p9 = 23, p10 = 29, p11 = 31, p12 = 37, p13 = 41, p14 = 43, p15 = 47, p16 = 53,
 p17 = 59, p18 = 61, p19 = 67, p20 = 71, p21 = 73, p22 = 79, p23 = 83, p24 = 89,
 p25 = 97, p26 = 101, p27 = 103, p28 = 107, p29 = 109, p30 = 113, p31 = 127, p32 = 131,
 p33 = 137, p34 = 139, p35 = 149, p36 = 151, p37 = 157, p38 = 163, p39 = 167, p40 = 173

Here are the first eleven words of Genesis 2. 9, spelled out in letter-names, translated into English, and transcribed into 400 gematria.

FIRST word: wau-yodh-tzaddi-mem-cheth = *and-made-to-grow* = 154

SECOND word: yodh-he-wau-he = *[the] LORD* = 26

THIRD word: aleph-lamedh-he-yodh-mem = *God* = 86

FOURTH word: mem-nun = *from* = 90

FIFTH word: he-aleph-daleth-mem-he = *the-earth* = 55

SIXTH word: kaph-lamedh = *every* = 50

SEVENTH word: ayin-tzaddi = *tree* = 160

EIGHTH word: nun-cheth-mem-daleth = *desirable* = 102

NINTH word: lamedh-mem-resh-aleph-he = *to-look-at* = 276

TENTH word: wau-teth-wau-beth = *and-good* = 23

ELEVENTH word: lamedh-mem-aleph-kaph-lamedh = *for food* = 121

In 400 gematria the words have values respectively of 154, 26, 86, 90, 55, 50, 160, 102, 276, 23, and 121. We’ll look at these numbers individually.

$$154 = p1 \times p5 \times p4$$

The number 154 represents *the first word of the verse*.

(If the first eleven words of Genesis 2. 9 are really related to prime numbers, then the very first word should proclaim the fact. And it does! The very first word has a gematric value of 2 x 11 x 7. 154 is the product of the FIRST, FIFTH, and FOURTH primes. In evidential terms, this first word is a star witness.)

Let’s move on to see how the ten following words may be interpreted.

$$26 = 2 \times p6$$

$$86 = \text{by interpretation } [8 + 6] = [1 \times 14], \text{ and } [p1 \times p14] = 86$$

$$90 \text{ (FOURTH word)} = p4 + p5 + p6 + p7 + p8 + p9$$

$$55 \text{ (FIFTH word)} = [5 \times p5]$$

50 = word number SIX, and six = two multiplied by three, and fifty is equal to the sum of the first TWO primes multiplied by the sum of the first THREE primes: $[p1 + p2] [p1 + p2 + p3] = 50$.

$$160 = p1 + p2 + p3 + p4 + p5 + p6 + p7 + p8 + p9 + p10 + p11$$

$$102 = p8 + p9 + p10 + p11$$

$$276 = p3 + p4 + p5 + p6 + p7 + p8 + p9 + p10 + p11 + p12 + p13 + p14$$

$$23 = p3 + p4 + p5$$

$$121 = p12 + p13 + p14$$

A majority of the words (six out of eleven) can be heard to speak the same simple but powerful message:

WE ARE COMPOSED OF CONSECUTIVE PRIMES.

- 90 = p4 + p5 + p6 + p7 + p8 + p9
 160 = p1 + p2 + p3 + p4 + p5 + p6 + p7 + p8 + p9 + p10 + p11
 102 = p8 + p9 + p10 + p11
 276 = p3 + p4 + p5 + p6 + p7 + p8 + p9 + p10 + p11 + p12 + p13 + p14
 23 = p3 + p4 + p5
 121 = p12 + p13 + p14

Notice that the ELEVEN words, which contain a total of FORTY-THREE characters, add up to 1143.

$$127 \text{ is } p_{31}, \text{ and } p_{31} \times [3 \text{ to the power } p_1] = 1143.$$

Now look at the eleven words in Hebrew, and take note of how many letters each word contains.

וּיצַמַח יְהוָה אֱלֹהִים מִן הָאָדָמָה
 כֹּל עֵץ נֹחַמֵד לְמַרְאֵה וְטוֹב לְמַאֲכֹל

Words 1 to 11 contain respectively five, four, five, two, five, two, two, four, five, four, and five letters.

These numbers may be arranged to form a numerical 'bird' with a body of 2-5-2-2-4 and a wing of 5-4-5 on either side.

5 4 5 2 5 2 2 4 5 4 5

Look at the 5-4-5 wing first of all.

5 x 4 x 5 = 100, and there are 100 primes between 1 and 545.

To those who work with primes, the number 545 is even more of a treasure than the number 154. Its palindromic form is mirrored by a kind of 'Jacob's Ladder' over which the first four primes parade in consecutive ascending and descending order.

545 is the sum of 128, 243, 125, and 49, or the sum of

| | | |
|--------------|---------------------------|------|
| TWO | to the power SEVEN | plus |
| THREE | to the power FIVE | plus |
| FIVE | to the power THREE | plus |
| SEVEN | to the power TWO . | |

Look at the whole bird once again, or rather *listen* to it.

5 4 5 2 5 2 2 4 5 4 5

You should be able to hear the bird singing two different numbers.

The first number which the bird sings is TWENTY-NINE (= the digital sum of one wing plus the digital sum of the body).

$$[5 + 4 + 5] + [2 + 5 + 2 + 2 + 4] = 29$$

(It may not be an accident that we're looking at Genesis chapter TWO, verse NINE. Those readers who find the suggestion preposterous should refrain from passing judgment until they've read chapter 29.)

The second number which the bird sings is TEN THOUSAND (= the digital product of the two wings taken together).

$$[5 \times 4 \times 5] \times [5 \times 4 \times 5] = 10,000$$

TEN THOUSAND may also be generated by the five digits of the body.

$$[25 \text{ to the power } 2] \times [2 \text{ to the power } 4] = 10,000$$

'Hold on,' says Lettuce Boy. 'You've produced the numbers TWENTY-NINE and TEN THOUSAND pretty well out of a hat. What are you going to do with those two numbers?'

I'm going to multiply them!

$$29 \times 10,000 = 290,000$$

Now let me use the whole bird.....

5 4 5 2 5 2 2 4 5 4 5

.....to generate the same number.

$$[5 \times 4 \times 5] \times [25 - 2 + 2 + 4] \times [5 \times 4 \times 5] = 290,000$$

'But what's the point of your two hundred and ninety thousand?' asks Delia. 'I mean, what does the author of Genesis want to show us?'

He wants to show us that he knows how many prime numbers there are between 1 and 290,000.

'How many *are* there?' asks Lettuce Girl.

Look at the body of the bird, and then I'll tell you.

5 4 5 2 5 2 2 4 5 4 5

There are 25224 primes between 1 and 290,000.

The 25,224th prime is 289999.

Don't think of that number as a *cul de sac*! When you add 289999 to its rank number 25224, you get 315223, which is the 27212th prime.

When from the rank number 27212 you subtract the rank number 25224, you get 1988, which is the sum of the first thirty-three primes.

$$\begin{aligned}
 &2 + 3 + 5 + 7 + 11 + 13 + 17 + 19 + 23 + 29 \\
 &+ 31 + 37 + 41 + 43 + 47 + 53 + 59 + 61 + 67 + 71 \\
 &+ 73 + 79 + 83 + 89 + 97 + 101 + 103 + 107 + 109 + 113 \\
 &+ 127 + 131 + 137 = 1988
 \end{aligned}$$

Look at the bird for one last time.

5 4 5 2 5 2 2 4 5 4 5

The digital product of its body is 160, which is the sum of the first eleven primes.

$$[2 \times 5 \times 2 \times 2 \times 4] = 160 = [2 + 3 + 5 + 7 + 11 + 13 + 17 + 19 + 23 + 29 + 31]$$

Oooohhhh! I'm thirsty. Delia and Rosie, bless them, are moving towards the kitchen. Today has been busy. After breakfast I received a phone call from Zygol Squid, who was always a bold fellow. Then I turned two *Strombus gigas* shells into trumpets for Cicely Grove. (Next week I have to paint La Stupenda as a pale blue conch-playing Nereid.) Both shells sounded *d'* when I carved their mouthpieces. By drilling through the spikes of one shell and grinding them down, I made a fingerhole-conch that plays *d'*, *d#'*, *e'*, *f'*, *f#'*, *g'*, *g#'*, and *a'*. Oh, and if you hand-stop the 'bell' of the undrilled shell, in the French-horn manner, you can get *c'* and *c#'* as well as *d'*. Why do people try to tell themselves that there is no new thing under the literal sun?

Enough! Some readers will want to make their own protracted study of the eleven-digit Mosaic bird, but for the present we have other work to get on with. What have we learned? That Moses, and maybe his Egyptian teachers, knew AT LEAST all the prime numbers between 1 and 290,000. Moses may have known a great deal more. And the fact that he has encoded certain information about the primes IN WORDS should encourage us to wonder if the order of the primes is rooted in something outside the realm of number.

Does that sound wild? Then I'll tell you something wilder. On the borders of the scientific world you meet certain journalists who refuse to accept that what they call 'the pattern of the primes' is still very far from being *known*. If you listen to these journalists, you'll come to believe either that the pattern has nearly been found, or that it is about to be found. IGNORE THEIR FOOLISH TALK. When you set yourself to discover some mathematical truth, imagination will sometimes be your friend, and wishful thinking will always be your enemy.

What-ho. The Blessed Ones have appeared with cups of tea and platefuls of honeycomb toast! Let us leave prime numbers to one side for a moment. While *we partake of the things provided for our bodily sustenance*, as your grandfather always says, we'll consider the last eight Hebrew words of Genesis 2. 9.

ועץ החיים בתוך הגן ועץ הדעת טוב ורע

These eight words encode the TERNARY and BINARY numbers. The ternary series runs 1, 3, 9, 27, 81, 243, 729, 2187, 6561, and so on. The binary series runs 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096, 8192, and so on.

Below you see the last eight words of Genesis 2. 9, spelled out in letter-names, translated into English, and transcribed into 400 gematria. My angular side-by-side translation is meant to show where the definite articles actually occur.

| | | |
|------------------------|---------------------------|-------|
| wau-ayin-tzaddi | = <i>and-tree-of</i> | = 166 |
| he-cheth-yodh-yodh-mem | = <i>the-life</i> | = 73 |
| beth-tau-wau-kaph | = <i>in-midst-of</i> | = 428 |
| he-gimel-nun | = <i>the-garden</i> | = 58 |
| wau-ayin-tzaddi | = <i>and-tree-of</i> | = 166 |
| he-daleth-ayin-tau | = <i>the-knowledge-of</i> | = 479 |
| teth-wau-beth | = <i>good</i> | = 17 |
| wau-resh-ayin | = <i>and-evil</i> | = 276 |

Here's a card about the *ternary numbers*.

THE TERNARY NUMBERS

'.....and the tree of life in the midst of the garden': 166 73 428 58.

The ten digits of the four numerated words run 1 6 6 7 3 4 2 8 5 8.

What is the first digit? ONE.

What letter comes 'in the midst of' the word he-gimel-nun (= the garden)? Gimel, the third letter of the Hebrew alphabet, which in both 22 and 400 gematria has a value of THREE.

In 22 gematria the word gimel-nun (= garden) has a value of 17. Write out the numbers one to seventeen. What number comes 'in the midst'? NINE.

In 400 gematria the word gimel-nun (= garden) has a value of 53. Write out the numbers one to fifty-three. What number comes 'in the midst'? TWENTY-SEVEN.

Here we discern the first four terms of the ternary series 1, 3, 9, and 27. The next five terms of the series (81, 243, 729, 2187, and 6561) leap out of the digits 1 6 6 7 3 4 2 8 5 8 as follows.

81 = 1 + 66 + 7 + 3 + 4

243 = 166 + 73 + 4

729 = 667 + 34 + 28

2187 = - [1+ 667 + 3] + 2858

6561 = 6673 - [4 x 28]

Was that easy to follow? Yes? Then here's a card about the *binary numbers*.

THE BINARY NUMBERS

'.....and the tree of the knowledge of good and evil': 166 479 17 276.

The eleven digits of the four numerated words run 1 6 6 4 7 9 1 7 2 7 6.

What is the first digit? ONE.

How many kinds of knowledge are there? TWO.

What is the fourth digit? FOUR.

What is the digital sum of 17 (= teth-wau-beth = good)? EIGHT.

What number may be read in the first and second digits? SIXTEEN.

Here we discern the first five terms of the binary series 1, 2, 4, 8, and 16. The next nine terms of the series (32, 64, 128, 256, 512, 1024, 2048, 4096, and 8192) leap out of the digits 1 6 6 4 7 9 1 7 2 7 6 as follows.

$$32 = 6 + 6 + 4 + 7 + 9$$

$$64 = 64 \text{ (third and fourth digits)}$$

$$128 = 166 - 47 + 9$$

$$256 = 4 + 79 + 172 + 7 - 6$$

$$512 = 4 + 791 - 7 - 276$$

$$1024 = 16 \times 64$$

$$2048 = [16 \times 64] \times [-7 + 9]$$

$$4096 = 64 [(7 \times 9) + 1]$$

$$8192 = 7917 + 276 - 1$$

'Your two cards are both clear enough,' says Lettuce Girl. 'But I have a problem with the tree of the knowledge of good and evil. That tree encodes a *series of numbers*.' She pauses. 'How can numbers be good and EVIL?'

Numbers in themselves can be neither morally good nor morally evil. And aside from the matter of numbers, we should take care not to construe the Biblical word EVIL as 'morally evil' in every circumstance.

You know Isaiah 45. 7.

יוצר אור ובורא חשך עשה שלום ובורא רע

(= I form the light, and create darkness: I make peace, and create evil.....).

The word rendered *evil* here does not mean 'wickedness'. It means 'trouble'.

‘You get the same idea in Matthew 6. 34,’ says Rosie. ‘Sufficient unto the day is THE EVIL THEREOF.’

Yes! The New American Standard Bible provides us with a perfect rendering of the Greek (η κακια αυτης).

Each day has enough trouble of its own.

EVIL can often mean TROUBLE, and there are times when TROUBLE is a consequence of COMPLEXITY.

‘Trouble lies in complexity which we have not been able to imagine,’ says Delia.

‘Or in complexity with which we are not equipped to deal,’ says Rosie.

Correct, ladies! The word EVIL need not always be construed specifically as WICKEDNESS. Don’t allow your understanding of words to be fettered by the narrow pejorities of vulgar usage. Think of the word ‘vicious’, which can mean either ‘malevolently addicted to vice’, or ‘nullified by a flaw’. A vicious dog may bite you in the ankle. A vicious circle will not.

Think of the word ‘evil’. Young Glenda Dearick is described by the staff of a certain art college as ‘an evil woman’ because she once tried to steal a Gaston Bussière poster from the college library. For several years a charlatan called Reginald Dacke, who hates every genuine manifestation of fine art, has ruled the college which I mention. Dr Dacke denounces Fragonard and Boucher as ‘frivolous exploiters’. He encourages his female students to spend their lives in the production of dish-cloths. (If you ask one of these ladies in later life a question about her paintings, she will reply in a happy-zombie voice, ‘I’m textiles.’) Last year a Great Conceptual Art Event was held in the college gallery. Dr Dacke was the star. At one point, having applied blue paint to certain parts of his anatomy, he walked around the gallery, wearing only a necklace of sardines. Two weeks ago Dacke stood on a traffic island during the evening rush-hour, and performed his own *Lied für Sprechstimme*: that is, he read into a megaphone two thousand street-names from all over the world. Many taxpayers resent the fact that they are forced to pay Dacke’s wages. Sane Christians who deplore the stealing of posters will recognize that Dr Dacke is profoundly evil.

Now think of the word ‘sin’. Young Pete Rodish is described by members of a certain church as ‘living in sin’ because he is not married to the lady called Edith Soper who shares his home. For two generations a tall and illiterate tyrant called Seth Prodie has ruled the church that I mention. Instead of reading the Bible, Mr Prodie reads the convoluted commentaries of Mark Esdras Doat. He addresses his tremulous flock in mincing shop-assistant formalese. He denounces women who wear ‘immodest raiment’. (His darling adverb is *scantily*.) Oh, and he attacks men who engage in any form of sport, even with their colleagues! Prodie’s unceasing radiation of gloom has wrecked the happiness of more than twenty families. Today his own children are embittered atheists. For the last three decades his poor wife Beth has been a desiccated wraith, entrusted with only two pleasures: the dusting of evangelical ornaments, and the production of jelly-bean tray-bakes. Sane Christians who deplore the sin of Pete and Edith, as Delia and I do, will recognize that the sin of Seth Prodie is enormously grave.

Last year the tyrant’s daughter Dorcas told me a tale that may remind some readers of Matthew 23. 27. In his so-called ‘sanctuary’, behind an enormous

portrait of some scowling theologian, Mr Prodie conceals a DVD player, on which he watches women's exhibition wrestling for hours at a time, with the sound turned down low. Oh, and he thinks that no one knows!

Another tale comes from the world of fund-raising fun-fairs. Not long ago a decorous mud-wrestling tournament was held in the town of Crumlin. One bout involved The Masked King Cophetua, who was clad in football gear, and The Masked Beggar Maid. (By order of a script-writer, the King excelled for the first fifty seconds, but was forced to 'submit' seven times in the next five minutes.) When battle ended the beaten Cophetua emptied a bucket of water over his own head, and found himself able to see once again. A digital scoreboard told the story of his defeat: KING 22 MAID 73. And there at the back, wiping an enormous pair of dark glasses with a white handkerchief, stood a tall man. Yesterday the same tall man rebuked three girls for attending a performance of *The Messiah!* Two-faced Seth Prodie is living in sin, even when he sits in solitary state.

Some readers are aware that the Albanian poet Ferdinand Laholli spent thirty years of his life in the Savra prison-camp. Laholli's language has a colossal gravity. The first two lines of his poem 'Savra', which I quote with great respect, may be applied without injustice to Prodie's ecclesial Alcatraz.

*Këtu është frikë të flasësh,
frikë të heshtësh.*

(= Here you're afraid to speak, and afraid to be silent.)

As in any tyranny, conformity leads to unhealth. The sad prisoners of Seth Prodie inhabit a monochrome world of evangelical magnolia. They believe that virtue is displayed in expensive clothes and expensive cars. They have an equally warped notion of sin and evil. First, they are morbidly fascinated by sin that relates in any way to the procreative faculties. Secondly, they denounce as evil such intrinsically good things as art, music, literature, and sport. Thirdly, they set their palsied faces against healthy honest hobbies.

'I know people like that,' says Rosie. 'Unclean inside, and full of ill-will.' She pauses. 'They remind me of Malvolio.'

To an actress, even a name may act as a cue. Delia decides to favour us with a wonderful vignette from *Twelfth Night*. She takes all three parts herself.

SIR TOBY

Possess us, possess us; tell us something of him.

MARIA

Marry, sir, sometimes he is a kind of *Puritan*.

SIR ANDREW

O, if I thought that, I'd beat him like a dog.

SIR TOBY

What, for being a Puritan? Thy exquisite reason, dear knight?

SIR ANDREW

I have no *exquisite* reason for't, but I have reason good enough.

The intellectual processes of an artist can be inscrutable. Mercurial and aloof, Miss Benn returns to numerical mode without acknowledging our applause.

‘Listen,’ she says. ‘Here is Malvolio, reading Maria’s letter.’

“Jove knows I love: But who? Lips, do not move, no man must know.” No man must know. What follows? The numbers altered! “No man must know --” if this should be thee, Malvolio?

‘When Malvolio says *The numbers altered*,’ Delia continues, ‘he means that the fourth line of the quatrain contains more syllables than you might have expected it to contain. Now the quatrain rhymes ABAB. Line one contains four syllables, line two contains two syllables, and line three contains four syllables, so you’d expect line four to contain only two syllables. In fact, it contains *four* syllables. The subtextual meaning is that Malvolio himself is going to be raised to a more exalted station, or raised to a higher power, if you want to be numerical. *The numbers altered*.’ Delia pauses. ‘It’s funny. I first heard those three words in a mathematics class. Our teacher was talking about prime numbers. She used Malvolio’s words to help us see that numbers don’t always behave in accordance with our expectations.’

‘Good for her!’ says Rosie. ‘But listen. The syllables in the four lines run 4-2-4-4.’ She pauses. ‘Is there anything remarkable about the number 4244?’

Oh, yes. 4244 is the sum of four consecutive primes (1051 + 1061 + 1063 + 1069). We may acquit Shakespeare of alluding to the fact! In real life, mind you, a group of consecutive prime numbers may constitute the subtext of some epic event.

$$[443 + 449 + 457 + 461 + 463] = 2273$$

2273 is both the 338th prime number and the 400 Hebrew gematric value of Joshua 13. 22. We may acquit the author of alluding to the fact that $13^2 \times 2 = 338$.

Now we’ll go back to Jane’s question. How can numbers be good and EVIL? The question may be answered in terms of ‘troublesome’ numbers. At times the complexity of a complex system will give rise to TROUBLE. (Remember: there is no dull creature anywhere in God’s universe. Not one of the numbers that God made was ever meant to be a dead thing in the mind of a theoretician.)

PRIME-NUMBER SAUL AND PRIME-NUMBER JONATHAN

Consider what David says in II Samuel 1. 23.

Saul and Jonathan (שָׂאוֹל וַיהוֹנָתָן) *were lovely and pleasant in their lives, and in their death THEY WERE NOT DIVIDED.....*

In 400 gematria shin-aleph-wau-lamedh (= Saul) adds up to 337, which is the sixty-eighth prime number, and yodh-he-wau-nun-tau-nun (= Jonathan) adds up to 521, which is the ninety-eighth prime number.

As prime numbers, Saul and Jonathan cannot be ‘divided’: but when they are linked by a conjunctive wau, whose 400 gematric value is 6, Saul and Jonathan combine to give the musical number 864 (= unitary string-length of the note *d*).

$$\begin{array}{c} \text{שָׂאוֹל וַיהוֹנָתָן} \\ 337 + 6 + 521 = 864 \end{array}$$

LET NOT THE GREEK BE LIGHTLY ESTEEMED BY THEE

It is a fact that I say more in my book about the Hebrew Old Testament than about the Greek New Testament. Several critics will be careful to point out that fact, and at least one of them will contrive to say *As the author himself admits*. Goats and monkeys! So far from 'admitting' anything, I merrily declare a fact which is rooted in my own pilgrimage. Other pilgrims can deal condignly with the Greek New Testament. (They can also liquidate the superstition that New Testament Greek is in literary terms 'inferior'.) For the present, let me ask and answer a question. 'Does the New Testament contain less mathematics, less music, and less cryptography than the Old Testament?'

NO!

In chapter 32 we shall glance at the mathematical works of a literate and musical author whose Greek *nom de plume* adds up in 800 gematric value to 1038. The said author has left us in the New Testament three short passages of Greek text which have 800 gematric values of 3642, 4509, and 8309. Instead of telling you where those passages are to be found, I shall adduce some material from *The On-Line Encyclopedia of Integer Sequences*.

[1.] 3642, like 1038, belongs to sequence A080715, whose author is Matthew Vandermast: *numbers n such that for any positive integers (a, b), if a x b = n, then a + b is prime*. The sequence runs 1, 2, 6, 10, 22, 30, 42, 58, 70, 78, 82, 102, 130, 190, 210, 310, 330, 358, 382, 442, 462, 478, 562, 658, 742, 838, 862, 970, 1038, 1222, 1282, 1318, 1618, 1810, 1870, 1978, 2038, 2062, 2098, 2242, 2398, 2458, 2578, 2902, 2938, 2962, 3018, 3082, 3322, 3642, and so on. We can use 1038 and 3642 as examples. The numbers [1038 + 1], [519 + 2], [346 + 3], and [173 + 6] are all prime. So are the numbers [3642 + 1], [1821 + 2], [1214 + 3], and [607 + 6].

If 1038 and 3642 are seen as standing respectively on the left and the right, the twenty numbers 1222, 1282, 1318, 1618, 1810, 1870, 1978, 2038, 2062, 2098, 2242, 2398, 2458, 2578, 2902, 2938, 2962, 3018, 3082, and 3322 may be seen as standing IN THE MIDDLE. You may recall that in Hebrew the word בתוך (= in the middle) has a 400 gematric value of 428.

Note that the numbers which stand IN THE MIDDLE (1222, 1282, 1318, 1618, 1810, 1870, 1978, 2038, 2062, 2098, 2242, 2398, 2458, 2578, 2902, 2938, 2962, 3018, 3082, and 3322) add up to 45196. Then see if you can construe a three-part mnemonic.

$$45196 = 35^3 + 13^3 + 124 \quad 353 + 133 + 124 = 610 \quad 610 + 428 = 1038$$

[2.] 4509 belongs to sequence A156778, whose author is M F Hasler: *n x (sum of first n primes) / 2*. The sequence runs 0, 1, 5, 15, 34, 70, 123, 203, 308, 450, 645, 880, 1182, 1547, 1967, 2460, 3048, 3740, 4509, and so on. If n = 18, we get 4509.

$$2 + 3 + 5 + 7 + 11 + 13 + 17 + 19 + 23 + 29 + 31 + 37 + 41 + 43 + 47 + 53 + 59 + 61 = 501$$

$$[18 \times 501] \text{ divided by } 2 = 4509$$

See if you can construe a simple mnemonic.

$$[18 + 501] \text{ multiplied by } 2 = 1038$$

The rest of this page has nothing to do with prime numbers, so you can ignore it if you want. The basis of equal temperament is the twelfth root of two, 1.0594631. Forget about the decimal point for a moment, and look at the eight digits 1 0 5 9 4 6 3 1.

$$[1059 + 4631] = 5690, \text{ and } [10 \times 59 \times 46 \times 31] = 841340, \text{ and } [841 + 340] = 1181$$

$$5690 - 1181 = 4509$$

The number 4509 provides us with an excellent mnemonic for the twelfth root of two.

‘COUNT THE NUMBER’ IS A NEW TESTAMENT COMMAND

[3.] 8309 belongs to sequence A061235, whose author is Amarnath Murthy: *number of primes between consecutive 4th powers*. The sequence runs 6, 16, 32, 60, 96, 147, 207, 283, 382, 486, 619, 773, 945, 1139, 1351, 1610, 1870, 2165, 2496, 2848, 3237, 3653, 4125, 4572, 5118, 5698, 6269, 6894, 7586, **8309**, and so on. Its thirtieth term stands for the 8309 primes between 30^4 (810000) and 31^4 (923521).

The six-part mnemonic that appears below enfolds the numbers 1038, 8309, 304, 314, and 113521 (the difference between 30^4 and 31^4). Note that $304 + 314 = 618$.

1038 read as $10^3 \times 8 = 8000$ 1038 read as $8 + 301 = 309$ $8000 + 309 = 8309$

$10 \times 38 = [61 \times 8] - [6 \times 18]$ $113521 = 48^3 + 54^2 + 13$ $483 + 542 + 13 = 1038$

[4.] 22352 combines the numbers 3642, 4509, and 8309 with the gematria of certain names whose bearers will appear in chapter 32. Note that 22352 belongs to sequence A166256, whose author is Zak Seidov: *numbers n with property that n^2 is a sum of some 70 successive primes*. The sequence runs 200, 322, 770, 982, 2848, 5552, 6622, 7236, 7292, 7972, 8472, 8750, 9166, 9350, 9708, 10272, 11922, 12242, 13246, 13280, 13648, 13728, 14736, 16552, 17134, 17556, 17800, 18294, 18410, 19296, 22352, and so on. Its thirty-first term declares that 22352^2 is the sum of the seventy consecutive primes beginning on p485330.

$$\begin{aligned}
 &7136729 + 7136743 + 7136771 + 7136791 + 7136797 + 7136807 + 7136863 + \\
 &7136867 + 7136873 + 7136879 + 7136887 + 7136897 + 7136917 + 7136971 + \\
 &7137001 + 7137029 + 7137043 + 7137047 + 7137071 + 7137073 + 7137077 + \\
 &7137083 + 7137101 + 7137121 + 7137131 + 7137149 + 7137167 + 7137181 + \\
 &7137191 + 7137203 + 7137209 + 7137259 + 7137287 + 7137301 + 7137311 + \\
 &7137313 + 7137343 + 7137359 + 7137371 + 7137379 + 7137397 + 7137421 + \\
 &7137437 + 7137439 + 7137463 + 7137491 + 7137517 + 7137553 + 7137583 + \\
 &7137587 + 7137589 + 7137593 + 7137601 + 7137617 + 7137623 + 7137631 + \\
 &7137653 + 7137677 + 7137703 + 7137733 + 7137737 + 7137743 + 7137763 + \\
 &7137769 + 7137817 + 7137827 + 7137829 + 7137833 + 7137839 + 7137847 = \\
 &499611904 = 22352 \times 22352
 \end{aligned}$$

Note that $[22 \times 1016] = 22352$, and that $[22 + 1016] = 1038$. If you go on to study the information which follows, you’ll see how 22352 provides sequence A166256 with a magnificent exemplar. The product of 22352’s digital sum (14) and 22352’s digital root (5) is 70. The difference between 14 and 5 is the SQUARE number 9. The SQUARE of 22352 is the NINE-digit number 499611904.

$$22352 = 28^3 + 20^2, \text{ and } 283 + 202 = 485 \qquad - 22 + 352 = 330$$

22352^2 is the sum of the seventy consecutive prime numbers starting on p485330.

[5.] When the seventeen digits of the numbers 3642, 4509, 8309, and 22352 are set out on one line, a kind of ‘bat number’ becomes visible (see page 420).

3 6 4 **2** 4 5 **0** 9 **8** 3 **0** 9 2 **2** 3 5 2

20802 belongs to sequence A046490, whose author is Patrick De Geest: *palindromes expressible as the sum of two consecutive palindromic primes*. The sequence runs 5, 8, 232, 282, 666, 20802, and so on. Its sixth term 20802 is the sum of the consecutive palindromic primes 10301 (p1263) and 10501 (p1285). The numbers 1263 and 1285 happen to be consecutive members of Patrick De Geest’s sequence A046353: *odd numbers whose sum of prime factors is palindromic (counted with multiplicity)*. $1263 = 3 \times 421$, and $3 + 421 = 424$. $1285 = 5 \times 257$, and $5 + 257 = 262$. We need a substantial mnemonic to cover all that.

$$[1263 + 1285] - 1038 = [424 + 262] + [103 \times 8]$$

$$1038 = [2 \times 519], \text{ and } [2 \times 5 \times 19] = [124 + 66], \text{ and } [12^4 + 66] = 20802$$

THERE ARE NO EPHEMERAL TRIVIALITIES IN THE BIBLE

Is it foolish to preserve useless chaff along with useful corn? Then many videographers are guilty of folly. You know what I mean. Last night you watched a lecture on the internet. First came ten minutes of introductory dither from the self-important shambles of a chairman, Johnnie Puggles. There followed six minutes of squalid inconsequence from the lecturer himself. (His delayed flight. His friendly Mexican taxi-driver. His enormous breakfast. His Cherokee great-great-great-grandmother. Plus the warm fraternal greetings which he brought to a solemnly nodding audience from his home institution – and here he lied, knowing that the said institution had sent no greetings whatever.) Suddenly you heard six words: *Today I want to talk about.* The lecturer had decided to begin.

Gaaahhh! In the multitude of words there wanteth not sin, and sin is often extremely boring. Television has taught people to multiply useless words. That ugly fact obliges me to articulate two precepts. Number one. Before a lecture is published on DVD, or on the internet, every atom of prelude garbage should be annihilated. Number two. A man who is asked to preach on a particular passage of Scripture should read it aloud and get to work, without any vacuous preamble.

Scripture itself has no room for the chaff that the wind driveth away. It is unthinkable that the Holy Spirit of God has preserved in the Bible pieces of language whose useful purpose died with their original recipients. *Treat the Scriptures with respect.* If you have to write a commentary on the book of Romans, take care to spend as much time on chapter 16 as you spend on chapter 1. Every word is there for an eternal reason. I mean to say, Romans 16 is the New Testament counterpart of II Samuel 23. 8-39. Study the text of Romans 16 diligently. Flee from any commentator who has theology on the brain. To regard the Bible as a theological book is to ignore its opulence. *Treat the Scriptures with respect.* If you have to preach about Eunice and Lois, ask yourself why St Paul has bothered to NAME Timothy's mother and grandmother. Then study the Greek text of II Timothy 1. 5. The word $\Lambda\omega\iota\delta\iota$ will direct you gematrically to the Hebrew text of Numbers 6. 24 (= *The LORD bless thee, and keep thee*), while the word Ευνικη will direct you gematrically to the Hebrew text of I Chronicles 1. 27 (= *Abram; the same is Abraham*). The faith of Eunice and Lois has very deep roots.

Now let me address the question of prime numbers in the New Testament. A little-known author has left us three short passages of Greek text which have 800 gematric values of 3642, 4509, and 8309. (Two of the three passages are greetings.) In 800 Greek gematria the author's *nom de plume* adds up to 1038, and the author's real name adds up to 1079. I reckon that this author was a considerable mathematician. Euclid's Greek phrase πρωτοι αριθμοι (= prime numbers) adds up in 800 gematria to 1600. Watch.

$$1038 = [2 \times 519], \text{ and } [2 + 519] + 1079 = 1600$$

$$22352 \text{ from page 471 read backward as } [25 \times 32 \times 2] = 1600$$

Do you believe that the gematric values 1038, 3642, 4509, and 8309 contain no mathematical message? Then see how much prime-number lore you can get out of 3641, 4508, and 8308. Put 1037 to work as a link-motif, and do your worst. But don't insult the authors of antiquity by alleging that they didn't know certain things, or that they couldn't have performed certain calculations. The people of antiquity were as clever as we are, and they didn't suffer from television. 'Even if that is true,' says Colin Tate, 'prime numbers are not *religious*.' Praise the LORD! Does a lugubrious theologian feel unhappy when prime numbers appear in the Biblical subtext? Well, a salubrious Christian would feel unhappy if they did not.

FIND THE PRIME WINGS OF A VESPERTILIAN POEM

Perform a little exercise while I put on the kettle. You may recall that Lettuce Girl sang a song called 'But now' at the end of chapter 12. Years ago I heard two antique dealers talking on the train about a Victorian hourglass, a Nanking porcelain cup, and a sampler dated 1842. When I got home I wrote a poem called 'But now' in the manner of Apollinaire. See if you can find the word *cup*, the word *dated*, and an authorial signature merely by counting letters.

A t N i G h T w E g **O ONF** O o T a L o N g A s H
 O r E w I t H p I n **E ANDRO** S e A n D s H o O t I
 N g S t A r I n C h **O IRBUTO** N c E a H e R o N q U
 A v E r S n E v E r **M OREISIT** I n P e T e R s N a V
 E a N d Q u I t T h **E LYREANO** R g A n P l A y S i N
 T i M e B e S i D e **A PRAYERT** O b I d T h E b E l F
 R y C h I m E i N s **E RENADEI** L e T t H e P s A l T
 E r C h A s E a W a **Y DESPAIR** A n D s A y A b E t T
 E r G r A c E i N m **I DBELGR** A d E i F l A t I n L
 E t T e R s T e L l **I NBUDA** P e S t O f H o W t H
 E p R i N c E o F h **E LLHA** S l O s T h I s P r E
 Y a S w A n O r T w **O WIL** L m A k E m E g L a D
 T o R e S t B e S i D **ET** H e G l A s S y L a K
 E t I l L b R a C i **N G** D a Y s O w A t C h A
 N d P r A y F o R s **O O** N a F a I t H f U l W
 O r D m A y T u R n **T HE** T o K e N m O o N f R
 O m R e D t O w H i **T EAN** D o N c E a H u M a N
 C r I e S t H e L o **R DHAT** H h E a R d T h E g L
 E e F u L b A t R e **P LIESI** N c L e A r D e L i G
 H t A h E r O n P a **I RCANPL** U m B t H e H o P e F
 U l P l O t O f C o **U PLEDYEA** R s T o C o M e I w A
 I t F o R n E w S a **N DTRAVEL** F a R a N d S t I l L
 F o R g E t Y o U n **O TBUTNOW** M y S o U n D i N g W
 I l L h A s F o U n **D AMUSETO** F i L l Y o U r P l A
 C e A n D n I g H t **L YNOWTHE** P a N e E n J o Y s A
 V a I n R e C i T a **L VOCALS** Q u E a K s O d E t T
 E i N t E a R s A d **I SMALB** A t I n P a I n A m I
 I n S a N e O r I s **I TYO** U t H a T s P e A k S

Back to work. We were talking about the trouble that arises from complexity. Remember? Then I mentioned 'troublesome' numbers.

Once you pass a certain point in the numerical system of the universe, you run up against the TROUBLE which is caused by certain intractable facts.

You discover that different forms of purity and rectitude produce TROUBLE whenever they interact. These forms of purity and rectitude, which are entirely good in themselves, actually compete with each other so as to create TROUBLE.

Take a D-string which is 1728 units long. It will sound a pure perfect octave above D with 864 units of its length, because the octave ratio is 1 : 2, and 864 is half of 1728.

The same string will sound a pure perfect fifth above D with 1152 units of its length, because the fifth ratio is 2 : 3, and 1152 is two-thirds of 1728.

Very good.

Now we'll take a string having a length of 1728 units long, and work out the length of the string which will sound the note SEVEN OCTAVES HIGHER. That means we'll divide 1728 by *two to the power seven* (128).

$$1728 \text{ divided by } 128 = 13.5$$

Then we'll multiply 13.5 by *two to the power seven* (128), so as to work out the length of the string which will sound the note SEVEN OCTAVES LOWER.

$$13.5 \text{ multiplied by } 128 = 1728$$

No problem so far!

Next we'll take a string which is 1728 units long, and work out the length of the string which will sound the note TWELVE FIFTHS HIGHER. That means we'll multiply 1728 by *two to the power twelve* (4096), and divide the product by *three to the power twelve* (531441).

$$1728 \text{ multiplied by } 4096 \text{ divided by } 531441 = 13.31829498$$

Now we'll multiply 13.31829498 by *two to the power seven* (128), so as to work out the length of the string which will sound the note SEVEN OCTAVES LOWER.

$$13.31829498 \text{ multiplied by } 128 = 1704.74176$$

Do you see the problem?

Start on 1728, go up seven octaves, come down seven octaves, and you land on 1728.

Start on 1728, go up twelve fifths, come down seven octaves, and you land on 1704.74176.

The difference between our original 1728 and the new horror-baby 1704.74176 is called the PYTHAGOREAN COMMA.

We may express the Pythagorean comma as a proportion of the original string-length in any of three ways:

as $531441 / 524288$,

or as *three to the power twelve over two to the power nineteen*,

or as 1.0136432647705078125 .

The Pythagorean comma articulates the TROUBLE that can arise between two great powers: the twelfth power of THREE, and the nineteenth power of TWO.

As soon as you attempt to tune a large stringed instrument like the harpsichord, you have to deal with numerical TROUBLE.

Of course the powers of two and three are not 'evil' (in the sense of 'wicked'), but the complexity of their relations can confront us with problems.

Thus the first constitutional problem in music comes down to a war between the first two prime numbers, or to a war between the numbers TWO and THREE.

The problem is solved after a fashion by means of a give-and-take arrangement called TEMPERAMENT, which we shall consider briefly in chapter 30.

For the present, you should develop your acquaintance with the primes by studying the table which follows. You'll see that I've set out the first thousand prime numbers in rows of five, and given the ordinal number of the leftmost prime in each row. Look at the first line of the table.

$p_1 = 2 \quad 3 \quad 5 \quad 7 \quad 11$

The equation $p_1 = 2$ means that the first prime number is 2.

It follows that the second prime number is 3, that the third prime number is 5, that the fourth prime number is 7, and that the fifth prime number is 11.

Look now at the sixth line of the table.

$p_{26} = 101 \quad 103 \quad 107 \quad 109 \quad 113$

The equation $p_{26} = 101$ means that the twenty-sixth prime number is 101.

It follows that the twenty-seventh prime number is 103, that the twenty-eighth prime number is 107, that the twenty-ninth prime number is 109, and that the thirtieth prime number is 113.

Is that clear enough?

The prime numbers: p1 to p155

| | | | | | | |
|------|---|-----|-----|-----|-----|-----|
| p1 | = | 2 | 3 | 5 | 7 | 11 |
| p6 | = | 13 | 17 | 19 | 23 | 29 |
| p11 | = | 31 | 37 | 41 | 43 | 47 |
| p16 | = | 53 | 59 | 61 | 67 | 71 |
| p21 | = | 73 | 79 | 83 | 89 | 97 |
| p26 | = | 101 | 103 | 107 | 109 | 113 |
| p31 | = | 127 | 131 | 137 | 139 | 149 |
| p36 | = | 151 | 157 | 163 | 167 | 173 |
| p41 | = | 179 | 181 | 191 | 193 | 197 |
| p46 | = | 199 | 211 | 223 | 227 | 229 |
| p51 | = | 233 | 239 | 241 | 251 | 257 |
| p56 | = | 263 | 269 | 271 | 277 | 281 |
| p61 | = | 283 | 293 | 307 | 311 | 313 |
| p66 | = | 317 | 331 | 337 | 347 | 349 |
| p71 | = | 353 | 359 | 367 | 373 | 379 |
| p76 | = | 383 | 389 | 397 | 401 | 409 |
| p81 | = | 419 | 421 | 431 | 433 | 439 |
| p86 | = | 443 | 449 | 457 | 461 | 463 |
| p91 | = | 467 | 479 | 487 | 491 | 499 |
| p96 | = | 503 | 509 | 521 | 523 | 541 |
| p101 | = | 547 | 557 | 563 | 569 | 571 |
| p106 | = | 577 | 587 | 593 | 599 | 601 |
| p111 | = | 607 | 613 | 617 | 619 | 631 |
| p116 | = | 641 | 643 | 647 | 653 | 659 |
| p121 | = | 661 | 673 | 677 | 683 | 691 |
| p126 | = | 701 | 709 | 719 | 727 | 733 |
| p131 | = | 739 | 743 | 751 | 757 | 761 |
| p136 | = | 769 | 773 | 787 | 797 | 809 |
| p141 | = | 811 | 821 | 823 | 827 | 829 |
| p146 | = | 839 | 853 | 857 | 859 | 863 |
| p151 | = | 877 | 881 | 883 | 887 | 907 |

The prime numbers: p156 to p310

| | | | | | | |
|------|---|------|------|------|------|------|
| p156 | = | 911 | 919 | 929 | 937 | 941 |
| p161 | = | 947 | 953 | 967 | 971 | 977 |
| p166 | = | 983 | 991 | 997 | 1009 | 1013 |
| p171 | = | 1019 | 1021 | 1031 | 1033 | 1039 |
| p176 | = | 1049 | 1051 | 1061 | 1063 | 1069 |
| p181 | = | 1087 | 1091 | 1093 | 1097 | 1103 |
| p186 | = | 1109 | 1117 | 1123 | 1129 | 1151 |
| p191 | = | 1153 | 1163 | 1171 | 1181 | 1187 |
| p196 | = | 1193 | 1201 | 1213 | 1217 | 1223 |
| p201 | = | 1229 | 1231 | 1237 | 1249 | 1259 |
| p206 | = | 1277 | 1279 | 1283 | 1289 | 1291 |
| p211 | = | 1297 | 1301 | 1303 | 1307 | 1319 |
| p216 | = | 1321 | 1327 | 1361 | 1367 | 1373 |
| p221 | = | 1381 | 1399 | 1409 | 1423 | 1427 |
| p226 | = | 1429 | 1433 | 1439 | 1447 | 1451 |
| p231 | = | 1453 | 1459 | 1471 | 1481 | 1483 |
| p236 | = | 1487 | 1489 | 1493 | 1499 | 1511 |
| p241 | = | 1523 | 1531 | 1543 | 1549 | 1553 |
| p246 | = | 1559 | 1567 | 1571 | 1579 | 1583 |
| p251 | = | 1597 | 1601 | 1607 | 1609 | 1613 |
| p256 | = | 1619 | 1621 | 1627 | 1637 | 1657 |
| p261 | = | 1663 | 1667 | 1669 | 1693 | 1697 |
| p266 | = | 1699 | 1709 | 1721 | 1723 | 1733 |
| p271 | = | 1741 | 1747 | 1753 | 1759 | 1777 |
| p276 | = | 1783 | 1787 | 1789 | 1801 | 1811 |
| p281 | = | 1823 | 1831 | 1847 | 1861 | 1867 |
| p286 | = | 1871 | 1873 | 1877 | 1879 | 1889 |
| p291 | = | 1901 | 1907 | 1913 | 1931 | 1933 |
| p296 | = | 1949 | 1951 | 1973 | 1979 | 1987 |
| p301 | = | 1993 | 1997 | 1999 | 2003 | 2011 |
| p306 | = | 2017 | 2027 | 2029 | 2039 | 2053 |

The prime numbers: p311 to p465

| | | | | | | |
|------|---|------|------|------|------|------|
| p311 | = | 2063 | 2069 | 2081 | 2083 | 2087 |
| p316 | = | 2089 | 2099 | 2111 | 2113 | 2129 |
| p321 | = | 2131 | 2137 | 2141 | 2143 | 2153 |
| p326 | = | 2161 | 2179 | 2203 | 2207 | 2213 |
| p331 | = | 2221 | 2237 | 2239 | 2243 | 2251 |
| p336 | = | 2267 | 2269 | 2273 | 2281 | 2287 |
| p341 | = | 2293 | 2297 | 2309 | 2311 | 2333 |
| p346 | = | 2339 | 2341 | 2347 | 2351 | 2357 |
| p351 | = | 2371 | 2377 | 2381 | 2383 | 2389 |
| p356 | = | 2393 | 2399 | 2411 | 2417 | 2423 |
| p361 | = | 2437 | 2441 | 2447 | 2459 | 2467 |
| p366 | = | 2473 | 2477 | 2503 | 2521 | 2531 |
| p371 | = | 2539 | 2543 | 2549 | 2551 | 2557 |
| p376 | = | 2579 | 2591 | 2593 | 2609 | 2617 |
| p381 | = | 2621 | 2633 | 2647 | 2657 | 2659 |
| p386 | = | 2663 | 2671 | 2677 | 2683 | 2687 |
| p391 | = | 2689 | 2693 | 2699 | 2707 | 2711 |
| p396 | = | 2713 | 2719 | 2729 | 2731 | 2741 |
| p401 | = | 2749 | 2753 | 2767 | 2777 | 2789 |
| p406 | = | 2791 | 2797 | 2801 | 2803 | 2819 |
| p411 | = | 2833 | 2837 | 2843 | 2851 | 2857 |
| p416 | = | 2861 | 2879 | 2887 | 2897 | 2903 |
| p421 | = | 2909 | 2917 | 2927 | 2939 | 2953 |
| p426 | = | 2957 | 2963 | 2969 | 2971 | 2999 |
| p431 | = | 3001 | 3011 | 3019 | 3023 | 3037 |
| p436 | = | 3041 | 3049 | 3061 | 3067 | 3079 |
| p441 | = | 3083 | 3089 | 3109 | 3119 | 3121 |
| p446 | = | 3137 | 3163 | 3167 | 3169 | 3181 |
| p451 | = | 3187 | 3191 | 3203 | 3209 | 3217 |
| p456 | = | 3221 | 3229 | 3251 | 3253 | 3257 |
| p461 | = | 3259 | 3271 | 3299 | 3301 | 3307 |

The prime numbers: p466 to p620

| | | | | | | |
|------|---|-------------|-------------|-------------|-------------|-------------|
| p466 | = | 3313 | 3319 | 3323 | 3329 | 3331 |
| p471 | = | 3343 | 3347 | 3359 | 3361 | 3371 |
| p476 | = | 3373 | 3389 | 3391 | 3407 | 3413 |
| p481 | = | 3433 | 3449 | 3457 | 3461 | 3463 |
| p486 | = | 3467 | 3469 | 3491 | 3499 | 3511 |
| p491 | = | 3517 | 3527 | 3529 | 3533 | 3539 |
| p496 | = | 3541 | 3547 | 3557 | 3559 | 3571 |
| p501 | = | 3581 | 3583 | 3593 | 3607 | 3613 |
| p506 | = | 3617 | 3623 | 3631 | 3637 | 3643 |
| p511 | = | 3659 | 3671 | 3673 | 3677 | 3691 |
| p516 | = | 3697 | 3701 | 3709 | 3719 | 3727 |
| p521 | = | 3733 | 3739 | 3761 | 3767 | 3769 |
| p526 | = | 3779 | 3793 | 3797 | 3803 | 3821 |
| p531 | = | 3823 | 3833 | 3847 | 3851 | 3853 |
| p536 | = | 3863 | 3877 | 3881 | 3889 | 3907 |
| p541 | = | 3911 | 3917 | 3919 | 3923 | 3929 |
| p546 | = | 3931 | 3943 | 3947 | 3967 | 3989 |
| p551 | = | 4001 | 4003 | 4007 | 4013 | 4019 |
| p556 | = | 4021 | 4027 | 4049 | 4051 | 4057 |
| p561 | = | 4073 | 4079 | 4091 | 4093 | 4099 |
| p566 | = | 4111 | 4127 | 4129 | 4133 | 4139 |
| p571 | = | 4153 | 4157 | 4159 | 4177 | 4201 |
| p576 | = | 4211 | 4217 | 4219 | 4229 | 4231 |
| p581 | = | 4241 | 4243 | 4253 | 4259 | 4261 |
| p586 | = | 4271 | 4273 | 4283 | 4289 | 4297 |
| p591 | = | 4327 | 4337 | 4339 | 4349 | 4357 |
| p596 | = | 4363 | 4373 | 4391 | 4397 | 4409 |
| p601 | = | 4421 | 4423 | 4441 | 4447 | 4451 |
| p606 | = | 4457 | 4463 | 4481 | 4483 | 4493 |
| p611 | = | 4507 | 4513 | 4517 | 4519 | 4523 |
| p616 | = | 4547 | 4549 | 4561 | 4567 | 4583 |

The prime numbers: p621 to p775

| | | | | | | |
|------|---|-------------|-------------|-------------|-------------|-------------|
| p621 | = | 4591 | 4597 | 4603 | 4621 | 4637 |
| p626 | = | 4639 | 4643 | 4649 | 4651 | 4657 |
| p631 | = | 4663 | 4673 | 4679 | 4691 | 4703 |
| p636 | = | 4721 | 4723 | 4729 | 4733 | 4751 |
| p641 | = | 4759 | 4783 | 4787 | 4789 | 4793 |
| p646 | = | 4799 | 4801 | 4813 | 4817 | 4831 |
| p651 | = | 4861 | 4871 | 4877 | 4889 | 4903 |
| p656 | = | 4909 | 4919 | 4931 | 4933 | 4937 |
| p661 | = | 4943 | 4951 | 4957 | 4967 | 4969 |
| p666 | = | 4973 | 4987 | 4993 | 4999 | 5003 |
| p671 | = | 5009 | 5011 | 5021 | 5023 | 5039 |
| p676 | = | 5051 | 5059 | 5077 | 5081 | 5087 |
| p681 | = | 5099 | 5101 | 5107 | 5113 | 5119 |
| p686 | = | 5147 | 5153 | 5167 | 5171 | 5179 |
| p691 | = | 5189 | 5197 | 5209 | 5227 | 5231 |
| p696 | = | 5233 | 5237 | 5261 | 5273 | 5279 |
| p701 | = | 5281 | 5297 | 5303 | 5309 | 5323 |
| p706 | = | 5333 | 5347 | 5351 | 5381 | 5387 |
| p711 | = | 5393 | 5399 | 5407 | 5413 | 5417 |
| p716 | = | 5419 | 5431 | 5437 | 5441 | 5443 |
| p721 | = | 5449 | 5471 | 5477 | 5479 | 5483 |
| p726 | = | 5501 | 5503 | 5507 | 5519 | 5521 |
| p731 | = | 5527 | 5531 | 5557 | 5563 | 5569 |
| p736 | = | 5573 | 5581 | 5591 | 5623 | 5639 |
| p741 | = | 5641 | 5647 | 5651 | 5653 | 5657 |
| p746 | = | 5659 | 5669 | 5683 | 5689 | 5693 |
| p751 | = | 5701 | 5711 | 5717 | 5737 | 5741 |
| p756 | = | 5743 | 5749 | 5779 | 5783 | 5791 |
| p761 | = | 5801 | 5807 | 5813 | 5821 | 5827 |
| p766 | = | 5839 | 5843 | 5849 | 5851 | 5857 |
| p771 | = | 5861 | 5867 | 5869 | 5879 | 5881 |

The prime numbers: p776 to p930

| | | | | | | |
|------|---|-------------|-------------|-------------|-------------|-------------|
| p776 | = | 5897 | 5903 | 5923 | 5927 | 5939 |
| p781 | = | 5953 | 5981 | 5987 | 6007 | 6011 |
| p786 | = | 6029 | 6037 | 6043 | 6047 | 6053 |
| p791 | = | 6067 | 6073 | 6079 | 6089 | 6091 |
| p796 | = | 6101 | 6113 | 6121 | 6131 | 6133 |
| p801 | = | 6143 | 6151 | 6163 | 6173 | 6197 |
| p806 | = | 6199 | 6203 | 6211 | 6217 | 6221 |
| p811 | = | 6229 | 6247 | 6257 | 6263 | 6269 |
| p816 | = | 6271 | 6277 | 6287 | 6299 | 6301 |
| p821 | = | 6311 | 6317 | 6323 | 6329 | 6337 |
| p826 | = | 6343 | 6353 | 6359 | 6361 | 6367 |
| p831 | = | 6373 | 6379 | 6389 | 6397 | 6421 |
| p836 | = | 6427 | 6449 | 6451 | 6469 | 6473 |
| p841 | = | 6481 | 6491 | 6521 | 6529 | 6547 |
| p846 | = | 6551 | 6553 | 6563 | 6569 | 6571 |
| p851 | = | 6577 | 6581 | 6599 | 6607 | 6619 |
| p856 | = | 6637 | 6653 | 6659 | 6661 | 6673 |
| p861 | = | 6679 | 6689 | 6691 | 6701 | 6703 |
| p866 | = | 6709 | 6719 | 6733 | 6737 | 6761 |
| p871 | = | 6763 | 6779 | 6781 | 6791 | 6793 |
| p876 | = | 6803 | 6823 | 6827 | 6829 | 6833 |
| p881 | = | 6841 | 6857 | 6863 | 6869 | 6871 |
| p888 | = | 6883 | 6899 | 6907 | 6911 | 6917 |
| p891 | = | 6947 | 6949 | 6959 | 6961 | 6967 |
| p896 | = | 6971 | 6977 | 6983 | 6991 | 6997 |
| p901 | = | 7001 | 7013 | 7019 | 7027 | 7039 |
| p906 | = | 7043 | 7057 | 7069 | 7079 | 7103 |
| p911 | = | 7109 | 7121 | 7127 | 7129 | 7151 |
| p916 | = | 7159 | 7177 | 7187 | 7193 | 7207 |
| p921 | = | 7211 | 7213 | 7219 | 7229 | 7237 |
| p926 | = | 7243 | 7247 | 7253 | 7283 | 7297 |

The prime numbers: p931 to p1000

| | | | | | | |
|------|---|-------------|-------------|-------------|-------------|-------------|
| p931 | = | 7307 | 7309 | 7321 | 7331 | 7333 |
| p936 | = | 7349 | 7351 | 7369 | 7393 | 7411 |
| p941 | = | 7417 | 7433 | 7451 | 7457 | 7459 |
| p946 | = | 7477 | 7481 | 7487 | 7489 | 7499 |
| p951 | = | 7507 | 7517 | 7523 | 7529 | 7537 |
| p956 | = | 7541 | 7547 | 7549 | 7559 | 7561 |
| p961 | = | 7573 | 7577 | 7583 | 7589 | 7591 |
| p966 | = | 7603 | 7607 | 7621 | 7639 | 7643 |
| p971 | = | 7649 | 7669 | 7673 | 7681 | 7687 |
| p976 | = | 7691 | 7699 | 7703 | 7717 | 7723 |
| p981 | = | 7727 | 7741 | 7753 | 7757 | 7759 |
| p986 | = | 7789 | 7793 | 7817 | 7823 | 7829 |
| p991 | = | 7841 | 7853 | 7867 | 7873 | 7877 |
| p996 | = | 7879 | 7883 | 7901 | 7907 | 7919 |

Once you get past the first two primes (TWO and THREE), you find every prime either immediately on the left or immediately on the right of a multiple of SIX.

Sometimes you find a prime *on EITHER side* of a multiple of six.

5 6 **7**

Sometimes you find a prime *only on the LEFT side* of a multiple of six.

23 24 25

Sometimes you find a prime *only on the RIGHT side* of a multiple of six.

35 36 **37**

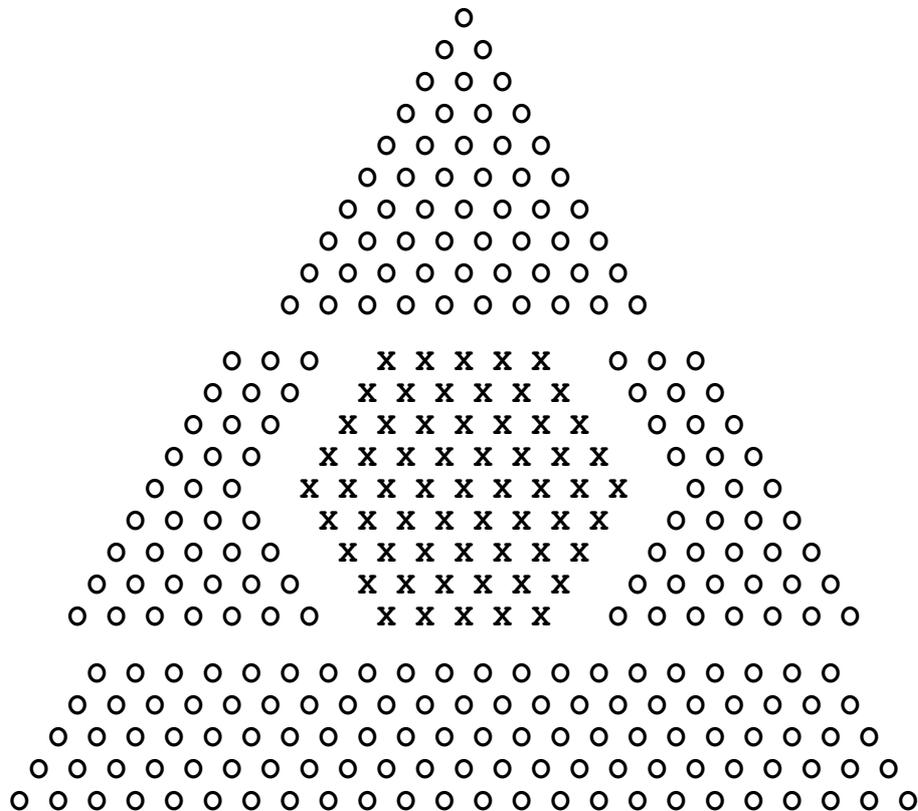
Sometimes you find a prime *on NEITHER side* of a multiple of six.

119 120 121

Do you get the idea?

‘Tell us about that multiple-of-six business once again,’ says Rosie.

All right! But we've been working pretty hard for the last hour, so let's take a break. While I'm pouring the tea you can look at an exploded triangle which represents three parables (the lost sheep, the lost coin, and the lost son).



The lost sheep represents 1% of a shepherd's property. The lost coin represents 10% of a woman's property. The lost son represents 50% of a father's male descendants. Three lots of 100% give us the three hundred counters of the whole triangle. Sixty-one of these counters are shown as exes. They represent the 'lost' percentages (1% + 10% + 50%). Does the number sixty-one mean anything to a gematrist?

'Oh, yes,' replies Delia. 'Sixty-one is the 400 gematric value of the Hebrew word aleph-yodh-nun, which means IS NOT.'

Brilliant! That is the answer for which I was hoping. Now we'll stop work. While we take our tea, we can examine Lettuce Girl's new green violin. ('It's a surprise present from my stepfather,' she explains. 'I think he's trying to make amends.' Jane pauses. 'You see, when I got my portrait painted he said that I had allowed myself to be *utterly exploited*. We didn't speak to each other for a week.') A formidable golden dragon is painted on the violin's back.

After break we'll return to the prime numbers, and to the multiple-of-six thing.

Once we get past the numbers two and three, we find primes ONLY either immediately on the LEFT, or immediately on the RIGHT of a multiple of SIX.

Here in fourteen rows are the first one hundred and sixty-eight multiples of six.

6 12 18 24 30 36 42 48 54 60 66 72
78 84 90 96 102 108 114 120 126 132 138 144
150 156 162 168 174 180 186 192 198 204 210 216
222 228 234 240 246 252 258 264 270 276 282 288
294 300 306 312 318 324 330 336 342 348 354 360
366 372 378 384 390 396 402 408 414 420 426 432
438 444 450 456 462 468 474 480 486 492 498 504
510 516 522 528 534 540 546 552 558 564 570 576
582 588 594 600 606 612 618 624 630 636 642 648
654 660 666 672 678 684 690 696 702 708 714 720
726 732 738 744 750 756 762 768 774 780 786 792
798 804 810 816 822 828 834 840 846 852 858 864
870 876 882 888 894 900 906 912 918 924 930 936
942 948 954 960 966 972 978 984 990 996 1002 1008

And here in fourteen corresponsive rows are the prime numbers p3 to p169.

5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73
79 83 89 97 101 103 107 109 113 127 131 137 139
149 151 157 163 167 173 179 181 191 193 197 199 211
223 227 229 233 239 241 251 257 263 269 271 277 281 283
293 307 311 313 317 331 337 347 349 353 359
367 373 379 383 389 397 401 409 419 421 431 433
439 443 449 457 461 463 467 479 487 491 499 503
509 521 523 541 547 557 563 569 571 577
587 593 599 601 607 613 617 619 631 641 643 647
653 659 661 673 677 683 691 701 709 719
727 733 739 743 751 757 761 769 773 787
797 809 811 821 823 827 829 839 853 857 859 863
877 881 883 887 907 911 919 929 937
941 947 953 967 971 977 983 991 997 1009

Multiples of six and their neighbouring primes

The number **870** has **no** prime neighbours: none on the left, and none on the right.
The number **876** has **one** prime neighbour: none on the left, and one on the **right**.
The number **882** has **two** prime neighbours: one on the **left**, and one on the **right**.
The number **888** has **one** prime neighbour: one on the **left**, and none on the right.
The number **894** has **no** prime neighbours: none on the left, and none on the right.
The number **900** has **no** prime neighbours: none on the left, and none on the right.
The number **906** has **one** prime neighbour: none on the left, and one on the **right**.
The number **912** has **one** prime neighbour: one on the **left**, and none on the right.
The number **918** has **one** prime neighbour: none on the left, and one on the **right**.
The number **924** has **no** prime neighbours: none on the left, and none on the right.
The number **930** has **one** prime neighbour: one on the **left**, and none on the right.
The number **936** has **one** prime neighbour: none on the left, and one on the **right**.

The number **942** has **one** prime neighbour: one on the **left**, and none on the right.
The number **948** has **one** prime neighbour: one on the **left**, and none on the right.
The number **954** has **one** prime neighbour: one on the **left**, and none on the right.
The number **960** has **no** prime neighbours: none on the left, and none on the right.
The number **966** has **one** prime neighbour: none on the left, and one on the **right**.
The number **972** has **one** prime neighbour: one on the **left**, and none on the right.
The number **978** has **one** prime neighbour: one on the **left**, and none on the right.
The number **984** has **one** prime neighbour: one on the **left**, and none on the right.
The number **990** has **one** prime neighbour: none on the left, and one on the **right**.
The number **996** has **one** prime neighbour: none on the left, and one on the **right**.
The number **1002** has **no** prime neighbours: none on the left, and none on the right.
The number **1008** has **one** prime neighbour: none on the left, and one on the **right**.

These sentences are clear enough, but they are needlessly ponderous. We should reduce the second part of each sentence to a single word.

For ONE ON THE LEFT, AND ONE ON THE RIGHT, we'll say EITHER.

For ONE ON THE LEFT, AND NONE ON THE RIGHT, we'll say LEFT.

For NONE ON THE LEFT, AND ONE ON THE RIGHT, we'll say RIGHT.

For NONE ON THE LEFT, AND NONE ON THE RIGHT, we'll say NEITHER.

In fact, we should reduce the second part of each sentence to a single *letter*.

For ONE ON THE LEFT, AND ONE ON THE RIGHT, we'll say **E.**

For ONE ON THE LEFT, AND NONE ON THE RIGHT, we'll say **L.**

For NONE ON THE LEFT, AND ONE ON THE RIGHT, we'll say **R.**

For NONE ON THE LEFT, AND NONE ON THE RIGHT, we'll say **N.**

Now we can go on to use one of these four letters (E, L, R, or N) to denote any trio of consecutive whole numbers ($n - 1, n, n + 1$) in which n is a multiple of six.

Here's what I mean.

A trio with a prime on EITHER side of n will be denoted by the letter E.

A trio with a prime only on the LEFT side of n will be denoted by the letter L.

A trio with a prime only on the RIGHT side of n will be denoted by the letter R.

A trio with a prime on NEITHER side of n will be denoted by the letter N.

Let me give you an example of each species.

We shall denote the trio 17-18-19 by the letter E.

We shall denote the trio 23-24-25 by the letter L.

We shall denote the trio 35-36-37 by the letter R.

We shall denote the trio 119-120-121 by the letter N.

Are you happy with these denotations?

'Yes!' says Rosie impatiently.

Then we can turn the one hundred and sixty-eight ponderous SENTENCES into a mnemonic table of one hundred and sixty-eight LETTERS.

We'll set the letters out in fourteen sets of twelve, as follows.

| | | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | E | E | E | L | E | R | E | L | L | E | R | E |
| 2. | R | L | L | R | E | E | L | N | R | L | E | N |
| 3. | E | R | R | L | L | E | N | E | E | N | R | N |
| 4. | R | E | L | E | N | L | L | L | E | R | E | N |
| 5. | L | N | R | E | L | N | R | R | N | E | L | L |
| 6. | R | R | R | L | L | R | L | R | N | E | N | E |
| 7. | R | L | L | R | E | L | N | L | R | L | R | L |
| 8. | L | N | E | N | N | R | R | N | L | L | E | R |
| 9. | N | L | L | E | R | R | E | N | R | N | E | L |
| 10. | L | E | N | R | L | L | R | N | L | R | N | L |
| 11. | R | R | R | L | R | R | L | R | L | N | R | N |
| 12. | L | N | E | N | E | E | N | L | N | R | E | L |
| 13. | N | R | E | L | N | N | R | L | R | N | L | R |
| 14. | L | L | L | N | R | L | L | L | R | R | N | R |

'If that is your mnemonic table, dear,' says Delia, 'it is definitely the most unmemorable thing that I've ever seen.'

Hold on, you horse. I haven't finished yet. You see, I'm going to convert the table of Es, Ls, Rs, and Ns into a piece of *language*.

'How are you going to do that?' asks Lettuce Girl.

Watch! We'll do it together.

First we turn every E into 1, every L into 2, every R into 3, and every N into 4.

| | | | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | 1 | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 2 | 1 | 3 | 1 |
| 2. | 3 | 2 | 2 | 3 | 1 | 1 | 2 | 4 | 3 | 2 | 1 | 4 |
| 3. | 1 | 3 | 3 | 2 | 2 | 1 | 4 | 1 | 1 | 4 | 3 | 4 |
| 4. | 3 | 1 | 2 | 1 | 4 | 2 | 2 | 2 | 1 | 3 | 1 | 4 |
| 5. | 2 | 4 | 3 | 1 | 2 | 4 | 3 | 3 | 4 | 1 | 2 | 2 |
| 6. | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 4 | 1 | 4 | 1 |
| 7. | 3 | 2 | 2 | 3 | 1 | 2 | 4 | 2 | 3 | 2 | 3 | 2 |
| 8. | 2 | 4 | 1 | 4 | 4 | 3 | 3 | 4 | 2 | 2 | 1 | 3 |
| 9. | 4 | 2 | 2 | 1 | 3 | 3 | 1 | 4 | 3 | 4 | 1 | 2 |
| 10. | 2 | 1 | 4 | 3 | 2 | 2 | 3 | 4 | 2 | 3 | 4 | 2 |
| 11. | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 4 | 3 | 4 |
| 12. | 2 | 4 | 1 | 4 | 1 | 1 | 4 | 2 | 4 | 3 | 1 | 2 |
| 13. | 4 | 3 | 1 | 2 | 4 | 4 | 3 | 2 | 3 | 4 | 2 | 3 |
| 14. | 2 | 2 | 2 | 4 | 3 | 2 | 2 | 2 | 3 | 3 | 4 | 3 |

Then we take the Hebrew alphabet and extract the digital roots of its 22 gematric values. Here are twenty-two facts.

Aleph has a numerical value of 1, and a digital root of 1.

Beth has a numerical value of 2, and a digital root of 2.

Gimel has a numerical value of 3, and a digital root of 3.

Daleth has a numerical value of 4, and a digital root of 4.

He has a numerical value of 5, and a digital root of 5.

Wau has a numerical value of 6, and a digital root of 6.

Zayin has a numerical value of 7, and a digital root of 7.

Cheth has a numerical value of 8, and a digital root of 8.

Teth has a numerical value of 9, and a digital root of 9.

Yodh has a numerical value of 10, and a digital root of 1.

Kaph has a numerical value of 11, and a digital root of 2.

Lamedh has a numerical value of 12, and a digital root of 3.

Mem has a numerical value of 13, and a digital root of 4.

Nun has a numerical value of 14, and a digital root of 5.

Samekh has a numerical value of 15, and a digital root of 6.

Ayin has a numerical value of 16, and a digital root of 7.

Pe has a numerical value of 17, and a digital root of 8.

Tzaddi has a numerical value of 18, and a digital root of 9.

Qoph has a numerical value of 19, and a digital root of 1.
 Resh has a numerical value of 20, and a digital root of 2.
 S(h)in has a numerical value of 21, and a digital root of 3.
 Tau has a numerical value of 22, and a digital root of 4.

Let me put twelve of those twenty-two facts into a single panel.

PANEL OF DIGITAL ROOTS

Aleph has a digital root of 1. So has yodh. So has qoph.
 Beth has a digital root of 2. So has kaph. So has resh.
 Gimel has a digital root of 3. So has lamedh. So has s(h)in.
 Daleth has a digital root of 4. So has mem. So has tau.

Now go back and look at the table of 1s, 2s, 3s, and 4s with which we replaced the table of Es, Ls, Rs, and Ns. We're going to convert that table of numbers into a mnemonical Hebrew 'poem'.

'How?' As she speaks, Delia plucks the A-string of the green violin. Two seconds later. Lettuce Girl strikes a tuning-fork against her own right knee.

Attend.

First, we'll go back to the numerical table, and use one hundred and twelve hyphens to turn the fourteen lines of twelve numbers into fourteen groups of four three-letter 'WORDS'.

| | | | | |
|-----|-------|-------|-------|-------|
| 1. | 1-1-1 | 2-1-3 | 1-2-2 | 1-3-1 |
| 2. | 3-2-2 | 3-1-1 | 2-4-3 | 2-1-4 |
| 3. | 1-3-3 | 2-2-1 | 4-1-1 | 4-3-4 |
| 4. | 3-1-2 | 1-4-2 | 2-2-1 | 3-1-4 |
| 5. | 2-4-3 | 1-2-4 | 3-3-4 | 1-2-2 |
| 6. | 3-3-3 | 2-2-3 | 2-3-4 | 1-4-1 |
| 7. | 3-2-2 | 3-1-2 | 4-2-3 | 2-3-2 |
| 8. | 2-4-1 | 4-4-3 | 3-4-2 | 2-1-3 |
| 9. | 4-2-2 | 1-3-3 | 1-4-3 | 4-1-2 |
| 10. | 2-1-4 | 3-2-2 | 3-4-2 | 3-4-2 |
| 11. | 3-3-3 | 2-3-3 | 2-3-2 | 4-3-4 |
| 12. | 2-4-1 | 4-1-1 | 4-2-4 | 3-1-2 |
| 13. | 4-3-1 | 2-4-4 | 3-2-3 | 4-2-3 |
| 14. | 2-2-2 | 4-3-2 | 2-2-3 | 3-4-3 |

We're nearly there! Look for a moment at the panel of digital roots. Then go to the numerical table, and watch.

We'll allow the number 1 to be represented by aleph, or by yodh, or by qoph.

We'll allow the number 2 to be represented by beth, or by kaph, or by resh.

We'll allow the number 3 to be represented by gimel, or by lamedh, or by s(h)in.

We'll allow the number 4 to be represented by daleth, or by mem, or by tau.

Have I been understood?

'Yes,' replies Delia, who often sees what bespectacled male scholars fail to see.



Good! Translate the numerical table of fifty-six embryonic 'words' into Hebrew.

'You do it,' says Lettuce Girl.

Very well. For the most part I'm going to use lapidary uninflected forms. In fact, I'm going to use three-letter Hebrew words as if they were Chinese characters.

Maybe you think I'm brutalizing the Hebrew language. But here goes.

I'll write out the 'poem' in unpointed Hebrew, and set the English letter-names underneath. Read the actual Hebrew from right to left, and the English letter-names from left to right.

| | | | | | | | | | | | |
|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| א | י | י | ש | ב | ק | ר | ב | ק | ש | א | |
| aleph | yodh | yodh | beth | qoph | shin | qoph | resh | beth | qoph | shin | aleph |
| ג | ב | ר | ש | ק | ק | ל | ב | ד | ל | י | ת |
| gimel | beth | resh | shin | qoph | qoph | beth | daleth | lamedh | beth | yodh | tau |
| ק | ל | ל | א | ב | ר | א | ד | ק | ק | ג | ד |
| qoph | lamedh | lamedh | beth | resh | aleph | daleth | qoph | qoph | mem | gimel | daleth |
| ש | י | ר | א | מ | ר | ב | ר | ק | ש | י | ת |
| shin | yodh | tau | beth | resh | qoph | shin | yodh | resh | aleph | mem | resh |
| כ | ת | ל | י | ר | ד | ג | ל | א | ב | ב | ב |
| kaph | tau | lamedh | yodh | resh | daleth | gimel | lamedh | mem | aleph | beth | beth |
| ש | ל | ש | ל | כ | ל | ר | ג | א | ת | י | י |
| shin | lamedh | shin | resh | kaph | lamedh | resh | gimel | mem | aleph | tau | yodh |
| ל | ב | ב | ש | א | ב | ל | כ | ל | ש | ר | ר |
| lamedh | beth | beth | shin | aleph | beth | mem | kaph | lamedh | beth | sin | resh |
| ר | ת | ק | מ | ת | ג | ש | מ | ר | א | ש | ר |
| resh | tau | qoph | mem | tau | gimel | shin | mem | resh | resh | aleph | shin |
| ד | ב | ר | א | ש | ש | א | ש | ש | ת | א | ב |
| daleth | beth | resh | aleph | shin | shin | aleph | mem | shin | tau | aleph | beth |
| ר | א | ם | ש | כ | ך | ג | מ | ר | ש | ת | ר |
| resh | aleph | mem | shin | kaph | kaph | gimel | mem | resh | shin | tau | resh |
| ש | ל | ל | ש | ב | ל | ר | ג | ב | ת | ל | ם |
| shin | lamedh | lamedh | beth | shin | lamedh | resh | gimel | beth | tau | lamedh | mem |
| ב | מ | י | מ | ק | ק | מ | ר | ד | ש | ק | ר |
| beth | mem | yodh | mem | qoph | qoph | mem | resh | daleth | shin | qoph | resh |
| מ | ל | א | ב | ד | ד | ש | ר | ש | ד | ב | ש |
| mem | lamedh | aleph | beth | daleth | daleth | shin | resh | shin | daleth | beth | shin |
| כ | ב | ר | מ | ש | ר | כ | ש | ג | מ | ל | ל |
| kaph | beth | resh | mem | sin | resh | resh | kaph | shin | gimel | mem | lamedh |

Now I'll furnish the Hebrew poem with an interlinear English translation. The poem represents 168 trios containing altogether 1467 digits, and it encodes precise information about the position of every prime number from p3 to p169.

א י י ב ק ש ק ר ב ק ש א

Where am I? Seek within the melon.

ג ב ר ש ק ק ב ד ל ב י ת

The strong one runs to and fro, dividing up his household.

ק ל ל ב ר א ד ק ק מ ג ד

The effulgent Creator grinds down finely what is most precious.

ש י ר א מ ר ב ר ק ש י ת

His music speaks in the lightning, setting things in order.

כ ת ל י ר ד ג ל ם א ב ב

A wall comes down when the embryo comes to fruition.

ש ל ש ר כ ל ר ג ם א ת י

The number three travels about with me as a friend.

ל ב ב ש א ב מ כ ל ב ש ר

My heart draws refreshment from every herald of good news.

ר ת ק מ ת ג ש מ ר ר א ש

The chief watchman uses his reins to exercise control.

ד ב ר א ש ש א מ ש ת א ב

The Word establishes the darkness by its own will.

ר א ם ש כ ך ג מ ר ש ת ר

The exalted star stoops down in perfection.

ש ל ל ב ש ל ר ג ב ת ל ם

Increase ripens in the earthen clods of the furrows.

ב מ י מ ק ק מ ר ד ש ק ר

Vain rebellion melts into water.

מ ל א ב ד ד ש ר ש ד ב ש

The root growing in solitude is filled with honey.

כ ב ר מ ש ר ר כ ש ג מ ל

The great one divides up the wealth of ripeness.

If you like you can transcribe the poem into musical notation.

‘I have a question,’ says Colin Tate. ‘What does the Sieve of Eratosthenes have to do with that Hebrew poem?’

‘Let me answer your question in one sentence,’ replies Miss Benn. ‘The Sieve of Eratosthenes has as much to do with that Hebrew poem as the Owl and the Pussy-Cat have to do with St Brendan the Navigator.’ She pauses. ‘Look at what *happens* in the poem, which comprises one hundred and sixty-eight Hebrew letters.’ Delia rises to her feet. ‘One hundred and sixty-seven primes, which run from five to one thousand and nine, are *precisely* represented in terms of every $(n - 1, n, \text{ and } n + 1)$ trio whose central member n is a multiple of six.’

Miss Benn causes me to recall a musical line of the Yiddish writer Anna Margolin.

בין איך פֿידל געוואָרן און דו דער בויגן

(= I have become a violin, and you have become the bow).

(In 400 gematria the first word adds up to 62, and the second word adds up to 31. Now you can claim to have discovered the 2 : 1 octave ratio in *Yiddish* gematria!)

While she has spoken the truth from a generous heart, Delia knows that my Hebrew poem is a perfectly trivial affair. The prime numbers came from the bright, opulent, and colourful mind of Almighty God. Somewhere in the library of heaven there is a prime-number poem which the LORD himself has written. That poem has as much to do with my fourteen-line miniature as the real sun has to do with the yellow blob in one corner of a child’s crayon drawing.

Nonetheless a crayon drawing may declare a certain amount of truth. In the beginning was the Word, the Musical Word. Don’t think of the *Sung* Word. Think of the *Singing* Word. Things on their own did not make other things. The Musical Word empowered shapes and numbers and notes to be co-realities in choreality.

(Merry music from the door-bell! Julia Arden is here to return the last of a dozen instruments which over recent weeks she has borrowed from me one at a time: valve trombone, auloi, Mongolian fiddle, lyra viol, quintern, bass gemshorn, guitar, vielle, bombarde, crwth, panpipe, and Aeolian wire harp. As a memento of the loan, Julia gives me a framed piece of calligraphy whose 108-letter text does two things. First, it encodes the names of twelve musical instruments. Secondly, it records a miracle of personal salvation.

A whipped life:
Liquor’s bane, iron bangle,
Hangs over toil-worn anvil.
A prayer lit up
Sombre chamber:
Diamond rivulet, oval gem --
Elation!

‘Wherein although but little reason be,’ says Julia, quoting Nicholas Breton, ‘Yet rime there is, and sence ynough for me.’ She smiles, and goes on her way.)

‘No, we’ll ask him before we EAT,’ says Lettuce Girl as I return to the room. ‘Listen, dear. Is there any sense in talking about *the pattern of the primes?*’

Sence ynough! What we may call ‘the pattern of the primes’ is not a numerical pattern. *Yet rime there is.* It is a VERBAL pattern. (Chant two syllables. *Yet rime. Yet rime. Yet rime.*) Here’s a great law. In the beginning was THE WORD. Prime numbers are not like the predictable old regulars who appear on cue in multiplication tables. Neither are we. I mean to say, we are not God’s numerical table! Listen to what St Paul tells his fellow-Christians in Ephesians 2. 10.

αυτου γαρ εσμεν ΠΟΙΗΜΑ..... (= For we are his POEM.....).

Prime numbers are the work of a great poet, and every great poet displays a capacity for caprice. I’m happy to believe that the prime numbers will always exceed our human comprehension, at least as far as the present life is concerned. That’s enough! Listen to the Chinese poet Han Yu.

時 見 松 櫪 皆 十 圍

(= At times I see pines and oaks around which no less than ten people might link their hands).

There is nothing arid or abstract about the primes. Listen to the exuberant author of Psalm 104.

ישבעו עצי יהוה (= The trees of the LORD are full of sap).

Before we stop for refreshment, listen once more to Genesis 2. 9.

ויצמח יהוה אלהים מן האדמה
כל עץ נחמד למראה וטוב למאכל

(= And out of the ground made the LORD God to grow every tree that is pleasant to the sight, and good for food.....).

MATTHEW WAS THE FIRST PERSON TO WRITE A GOSPEL

In 400 Hebrew gematria the name of Moses (משה: mem-shin-he) adds up to 345, and the first word of Genesis (בראשית: beth-resh-aleph-shin-yodh-tau) adds up to 913. In 800 Greek gematria the name of Matthew (Μαθθαιος: mu-alpha-theta-theta-alpha-iota-omicron-sigma) adds up to 340, and the first word of his gospel (βιβλος: beth-iota-beth-lambda-omicron-sigma) adds up to 314. Furthermore, the first book of the Septuagint is called Γενεσις (= Genesis). Now watch.

The name of Moses begins with mem, and the name of Matthew begins with mu. Matthew 1. 1 contains a genitive-case form of the word γενεσις (= genesis). There are six Hebrew letters in בראשית, and six Greek letters in βιβλος. In addition, the word בראשית begins with beth, and the word βιβλος begins with beta.

[345 + the number of letters in משה] = [340 + the number of letters in Μαθθαιος]

345 = [15 x 23] or [23 x 15], and 913 = [11 x 83], and [1523 – 1183] = 340

[345 x 913] = 314,985, and 985 = [197 x 5], and 2315 – 1975 = 340

Here is what we may conclude. The first book of the New Testament was waiting to be written by Matthew, and it was waiting to be called βιβλος. For his part, Matthew knew that he was writing the first book of the New Testament.

CHAPTER 22: SHEW THEM THE FORM

КВАДРАТЫ, ПАРАЛЛЕЛЕПИПЕДЫ, КУБЫ (= Squares, parallelepipeds, cubes)

Andrei Bely, *Petersburg*

The two large volumes of *The Secret Doctrine*, recently issued by Madame Blavatsky, furnish just this key.....

J D Buck, MD

‘Glad to know you've got more sense than that fool cousin of yours.’

William MacLeod Raine, *The Vision Splendid*

Ik ben de blauwbilgorgel..... (= I am the bluebillgurgle).

Cees Buddingh'

Time has passed, and *Winter is icumen in*, as Ezra Pound would say. Your cousin Adam has invited you and me to spend the afternoon in his study. Although Colin Tate did threaten to join us, he hasn't appeared yet.

According to Adam, the brain likes to think not in words, but in polygons.

Now your cousin is neither a fantast nor a fool. He holds a bachelor's degree in astronomy, a master's degree in cognitive studies, and a doctorate in psychology. Years ago he helped to set up a programme of meteor viewing in the Transferred Chaos Institute. And while he was at TCI, Adam came to believe in *subconscious gematria*.

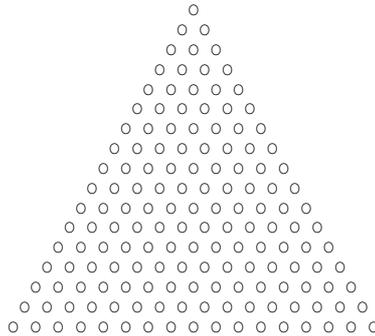
If you've learned how to READ, he says, in a language whose alphabet has an ESTABLISHED RUNNING ORDER, then your brain will do three things.

1. It will translate the letters of particular words or phrases into units, tens, and hundreds (yes, in terms of what we call 'the 800 English alphabet!').
2. It will work out the total numerical values of particular words or phrases.
3. It will *actually savour* any totals which may be arranged figurately.

‘Why is the word COOL so popular today?’ your cousin asks. ‘People in Britain and America say, *That's cool*. Germans say, *Das ist ja cool*. Italians say, *È molto cool*. And you'll even hear people in France say, *C'est très cool*. How has the word COOL managed to grab everyone?’

Adam pauses. ‘It all comes down to *subconscious gematria*. The brain reads C as three, O as sixty, O as sixty once again, and L as thirty. Then it adds up those four numbers to get a total of one hundred and fifty-three. Soon it notices that

one hundred and fifty-three is the triangular number of seventeen. So COOL becomes a popular word.'



Your cousin smiles. 'One hundred and fifty-three is also the gematric value of Angelina Jolie's forename,' he explains solemnly. 'A is one, N is fifty, G is seven, E is five, L is thirty, I is nine, N is fifty, and A is one. But when you add.....'

Hold on, you say. Is *gematria* helping to make Angelina Jolie popular?

'Yes, of course,' Adam replies. 'But let's have a tea-break before we start.'

Good idea. During the break we can talk about something sensible.

HOW TO DIVIDE WHAT IS GEOMETRICALLY INDIVISIBLE

On your walks about London you will often meet weak and deluded creatures who claim to have found a way of trisecting the angle. The said creatures have pronounced my own method to be 'outrageous'. Here is it. Take the angle, put your compass-point on the vertex, and draw an arc XY which marks off an equal distance on each arm. Convert this arc into a piece of springy steel wire, and weld the two ends X and Y together. Find the centre of the circle so created, and use a radius-length to locate six equidistant points on the circumference, starting at the welded junction-point of X and Y (call this point A, and call the other five points B, C, D, E, and F). Now mark notches at C and E with a three-cornered file. Unweld the join and put the wire arc XY back exactly as it was between the arms of the angle. Connect C and E to the vertex by drawing two straight lines.

Any man who owns an arc welder should be able to weld an arc.

Back to work! Whom were we talking about? Miss Angelina Jolie.....

.....and the triangular number of seventeen.

Oh, dear. While the shape of *one hundred and fifty-three* is familiar to you, it doesn't incline you to accept your cousin's idea. What is he saying now?

'The names of many prominent people, the names of fictional characters, the titles of books, the titles of films, and even the words of clichés or proverbial phrases are embraced by a public which has subconsciously converted the gematric sums of their LETTERS into well-known FIGURATE NUMBERS.'

In support of his notion your cousin goes on to adduce a number of examples.

PAMELA LEE ANDERSON adds up to 547, which is the centred hexagonal number of fourteen.

GARRISON KEILLOR adds up to 651, which is the pentagonal number of twenty-one.

DOLLY PARTONS adds up to 1395, which is the hendecagonal number of eighteen.

XIOMARA REYES adds up to 1701, which is the decagonal number of twenty-one. (I should have known that! Years ago, after a terrifying performance of *Giselle*, Miss Reyes gave me the shoes in which she had danced the rôle of Myrtha. At the time of writing she is Principal Dancer with American Ballet Theatre.)

LOUIS D L'AMOUR adds up to 1024, which is the square of thirty-two, and the title of his novel **SACKETT** adds up to 529, which is the square of twenty-three.

WILLIAM SHAKESPEARE also adds up to 1024, which is the square of thirty-two, and the title of his play **THE TEMPEST** adds up to 833, which is the stellate number of seventeen.

DIDEM KINALI, the Turkish dancer of Roma descent, adds up to 181, which is the hexagon-based dodecagonal number of six.

The name of Edgar Allan Poe's character **RODERICK USHER** adds up to 784, which is the square of twenty-eight.

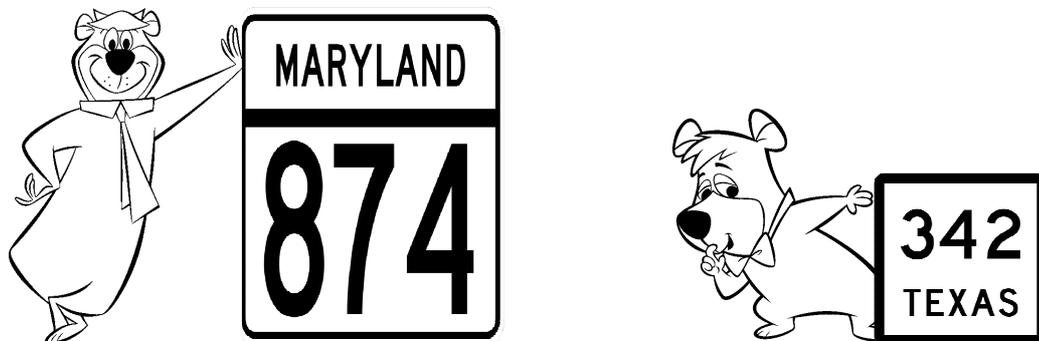
PARA HANDY, the rather more robust character created by Hugh Foulis, adds up to 925, which is the pentagonal number of 25.

LARA CROFT, the heroine of *Tomb Raider*, adds up to 481, which is the stellate number of thirteen.

CAROL WILLIAMS, the Welsh-born organist, adds up to 903, which is the triangular number of forty-two.

Larry Niven's novel-title **THE LONG ARM OF GIL HAMILTON** adds up to 1001, which is the pentagonal number of twenty-six. (So does the name of **AMARYLLIS**, which Craig Crist-Evans used as the title for his first novel.)

YOGI BEAR adds up to 874, which is the heptagonal number of nineteen.



And **BOO BOO BEAR** adds up to 342, which is the heptagonal number of twelve.

TUPPERWARE adds up to 1331, which is the cube of eleven.

The booby-phrase **HOW DARE YOU** adds up to 1728, which is the cube of twelve.

Now consider the booby-phrase **FOR ONE MOMENT**. In vulgar speech that phrase is ritually appended to the verbs *doubt* and *suggest*. **FOR ONE MOMENT** adds up to 666, which is the triangular number of thirty-six.

Look at the word **GRAB**. People who delight in verbal crudity don't 'take', or 'drink', or even 'have' a cup of coffee. They **GRAB** it. Is there a reason? Perhaps. **GRAB** adds up to 100, which is the square of ten. (**GRAB A CUP OF COFFEE** adds up to 625, which is the square of twenty-five.)

It even works for pieces of confectionery, both in the USA and in the UK. Hershey's **WHATCHAMACALLIT** adds up to 1035, which is the triangular number of forty-five. **MARS BAR** adds up to 324, which is the square of eighteen.

Well! You'll need a bit of time to investigate your cousin's idea, but at the moment your instinct tells you that **HIS IDEA STINKS**.

An hour later, after using Adam's computer to transcribe several hundred pieces of language into 800 English gematria, you begin to think that your instinct was right. It doesn't matter whether you work with real names, fictional names, book-titles, film-titles, proverbial phrases, clichés, or chocolate bars. For every one piece of language whose total gematric value tallies with a well-known figurate number, there are three or four pieces of language that refuse to oblige. Has the broadcaster **MORT CRIM** been successful because his name adds up to 532, which is the pentagonal number of nineteen? Get real. **JESSICA YELLIN**, whose name adds up to an obscure 1052, has made it on her own, without any help from Fame's Favourable Figurates. So have plenty of others.

Of course the reverse is true. Some less than glorious names, and some trivial pieces of language, may be converted into undeniably figurate numbers. (I alluded on page 18 to five scholars who once accused me of having 'invented a lunatic language'. These scholars add up to 4347, which is the pentagonal number of fifty-four. For their part Neighbour Verges, Chumley the Walrus, Beaky Thwaite, Theophilus Goon, and Alain from *La fille mal gardée* add up to 6657, which is what mathematicians call the 75-gonal number of fourteen.)

Your uncle's cleaner is called **MIRIAM HOOKE**. Her name adds up to 342, which is the heptagonal number of twelve. Your uncle's cook is called **GERMAINE LEAR**. Her name adds up to 333, which is the hendecagonal number of nine. So it goes on. When you pick up today's local paper, you find the recipe for a Norwegian dish that Germaine Lear made last Christmas. **LUTEFISH PIE** adds up to 742, which is the decagonal number of fourteen.

On the next page you notice two sentences near the end of an article in the business section.

For too long I had promoted my company's product. Now I promoted its staff.

The second sentence (**NOW I PROMOTED ITS STAFF**) adds up to 1770, which is the triangular number of fifty-nine. And a sentence that you lift at random from the arts page of today's paper – **THE MUSIC CRITIC HAD A BAD TIME ON A PLANE** – adds up to 1521, which is the square of thirty-nine. Don't blame me!

(A notorious verbal darling of the said critic – **ACHINGLY LILTING CHORDS** – adds up to 1408, which is the stellate number of twenty-two.)

On the same arts page you read about the dame in next week's pantomime. She's called ANNABELLE MO FISHHOOKS, and her name adds up to 645, which is the stellate number of fifteen. Furthermore, the pantomime's title BAKED IN A PIE adds up to 176, which is the pentagonal number of eleven.

Here's one to finish with. The stupidest word in the English language is AMPERSAND, the name of the & sign. Now of course the sign itself can be jolly useful. (Until recently it served as a vowel in Marshallese.) You remember how in 1925 the poet e. e. cummings published a volume of verse entitled &. You also remember what Thomas Mace wrote in *Musick's Monument* (London, 1676):

And that you may know how to shelter your lute, in the worst of ill weathers, (which is moist) you shall do well, ever when you lay it by in the day-time, to put it into a bed, that is constantly used, between the rug and blanket but never between the sheets, because they may be moist with sweat, &c.

The name of the & sign is derived from a mouthful of pure lunacy: 'and *per se* and'. No one could describe the sign's *name* as a thing of beauty. Yet in 800 English gematria AMPERSAND adds up to 361, which is the square of nineteen.

Enough! These findings suggest that there is a rift in your cousin's lute. He's like a believer in phlogiston who performs hundreds of experiments, and publishes only the results which appear to confirm his phlogistic beliefs.

What's more, he is content to *propound the idea* that many pieces of language 'succeed' because of their numerical subtext.

Your cousin must put his idea synthetically TO THE TEST if he wants to be taken seriously.

Here are seven exciting things for him to do.

1. Write a country-and-Western song entitled SHE CALLS ME HER OLE KOMODO DRAGON.
2. Write a solemn Sokalian article entitled STOP YOUR POSTCOLONIAL NONSENSE.
3. Write a short story entitled THE WARDROBES OF BAMBOO.
4. Write a volume of Dadaist verse entitled MUCILAGINOUS BAG.
5. Write a novel entitled THEIR EXPLODING WIGS OF DEATH.
6. When that novel becomes a best-seller, *as it is bound to do*, write a textbook entitled THE WILFUL BLINDNESS OF MERE MANAGERSHIP.
7. Produce a sensational new perfume by distilling a mixture of marigold, mulberry, and mistletoe. Market the new scent in Anglophone countries under the name of MY MIST.

Behind each piece of language your cousin will be able to see a figurate number.

SHE CALLS ME HER OLE KOMODO DRAGON adds up to 976, which is the decagonal number of sixteen.

STOP YOUR POSTCOLONIAL NONSENSE adds up to 2673, which is the heptagonal number of thirty-three.

THE WARDROBES OF BAMBOO adds up to 1296, which is the square of thirty-six.

MUCILAGINOUS BAG adds up to 919, which is the centred hexagonal number of eighteen.

THEIR EXPLODING WIGS OF DEATH adds up to 2047, which is the decagonal number of twenty-three. (That magnificent piece of language comes from the Muppets, not from me.)

THE WILFUL BLINDNESS OF MERE MANAGERSHIP adds up to 2025, which is the square of forty-five.

MY MIST adds up to 1089, which is the square of thirty-three.

What's more, **MY MIST** will translate nicely into German as **MEIN DAMPF**. It is thrilling to discover that **MEIN DAMPF** adds up to 225, which is the square of fifteen.

Never despise **PERFUMES** (= 616, the heptagonal number of sixteen). Remember: the great villain Dr Fu Manchu was created by a perfume-designer.

Anyway! If your cousin can be persuaded to employ these potent figurate jewels, **HIS SUCCESS IS GUARANTEED**. Or as people say in Germany, *Sein Erfolg ist garantiert*. And that reminds me. More than forty years ago, in an unforgettable song, France Gall celebrated the advent of computerized dating agencies.

*Der Computer Nummer Drei
Sucht für mich den richtigen Boy,
Und die Liebe ist garantiert.....*

(= Computer Number Three is looking for the right boy for me, and love is guaranteed.....).

What is it that causes the text of France Gall's song to lodge in the memory?

Maybe it's the early appearance of the number *Drei* (= THREE). I don't know why the number THREE should be specially memorable. But I've noticed that in many Chinese poems, the number 三 (*sān* = THREE) makes an early appearance.

Du Fu begins one poem as follows:

西 山 白 雪 三 城 戍

(= On western mountains, white snow, and on THREE garrison-towns.....).

He begins another poem thus:

蜀 主 征 吳 幸 三 峽

(= Shu's ruler invaded Wu and reached the THREE Gorges.....).

He begins another poem as follows:

三 月 三 日 天 氣 新

(= In the **THIRD** month, on the **THIRD** day, as a fresh wind blows.....).

Du Fu begins yet another poem thus:

功 蓋 三 分 國

(= He succeeded in uniting **THREE** divided kingdoms).

Liu Chang Qing begins an address to Jia Yi as follows:

三 年 謫 宦 此 棲 遲

(= **THREE** long years you spent here as a disgraced official.....).

And when Wang Bo is saying farewell to a friend, he begins thus:

城 闕 輔 三 秦

(= The castle tower protects **THREE** states of Qin.....).

Wang Wei begins his poem about a great river as follows:

楚 塞 三 湘 接

(= **THREE** branches reaching the borders of Chu.....).

Cui Tu begins one poem thus:

迢 遞 三 巴 路

(= I have come a long way from the **THREE** roads of Ba.....).

Han Yu begins one poem as follows.

五 嶽 祭 秩 皆 三 公

(= The five Sacred Mountains have the rank of all **THREE** Lords).

Finally, Wang Jian begins one poem thus:

三 日 入 廚 下

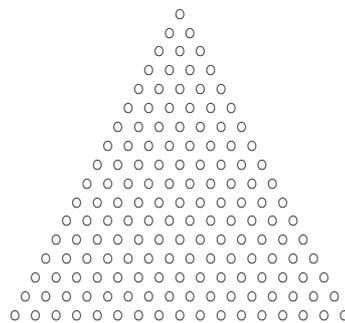
(= On the **THIRD** day I go down to the kitchen).

Oh, dear. Your cousin is muttering that **THREE** is the triangular number of **TWO**! Let me bring up **TWO** little matters for his consideration.

Here's the first one. Apart from suppressing a multitude of unfavourable results, for so he must have done, your cousin has not played fair.

The greatest of all Western writers was christened 'Louis Dearborn L'Amour', but his authorial name was 'Louis L'Amour', not 'Louis *D* L'Amour'. Without the *D* he adds up to 1020. Why did your cousin refer to him as 'Louis *D* L'Amour'? Because he wanted a total gematric value of 1024 (the square of thirty-two).

Here's the second matter. Your cousin has made a point of telling us that **ANGELINA** adds up to one hundred and fifty-three, which is the triangular number of seventeen.



Will he kindly tell us what **ANGELINA JOLIE** adds up to?

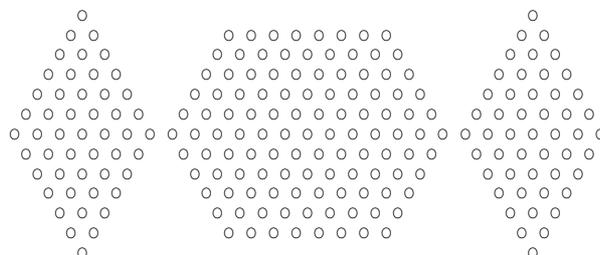
'Two hundred and sixty-seven,' your cousin says at once.

Is that a well-known figurate number, you ask.

'No,' Adam replies. 'It is a glorious combination of *three* figurate numbers.'

As Colin Tate enters the room, your cousin produces a diagram. 'Two hundred and sixty-seven is made up of two squares of seven, and one centred hexagonal number of eight,' he says. 'Look.' He points. '*That's* how your brain really sees the number two hundred and sixty-seven.'

You examine the diagram. At first it makes you think, in a pleasant sort of way, about a foil-wrapped cube of home-made fudge.



But before long it arouses in you a strong feeling of rage. You're not angry to see two rhombuses masquerading as two squares. You're angry to see a group of *three separate figures* masquerading as one entity. How will your cousin contrive to explain such a spurious 'combination'? If we're going to play that sort of game with Angelina Jolie, you think, then every lady whom you can think of is figurate.

Look at the model and stunt-driver **GEORGIA DURANTE**. *Her* gematric value of 829 reveals itself to be ‘a glorious combination’: $253 + 276 + 300$. (Two hundred and fifty-three is the triangular number of twenty-two, while two hundred and seventy-six is the triangular number of twenty-three, and three hundred is the triangular number of twenty-four.)

Look at the human star of *King Kong*. **FAY WRAY**’s gematric value of 1998 reveals itself to be another glorious combination: $666 + 666 + 666$. (Six hundred and sixty-six is the triangular number of thirty-six.)

Look at the ballerina **TAMARA ROJO**, who at the time of writing is Principal Dancer with the Royal Ballet in London. *Her* gematric value of 553 reveals itself to be another glorious combination: $96 + 361 + 96$. (Ninety-six is the stellate number of six, while three hundred and sixty-one is the square of nineteen.)

Look at the broadcaster **JESSICA YELLIN**. *Her* gematric value of 1052 reveals itself to be another glorious combination: $376 + 300 + 376$. (Three hundred and seventy-six is the pentagonal number of sixteen, while three hundred is the triangular number of twenty-four.)

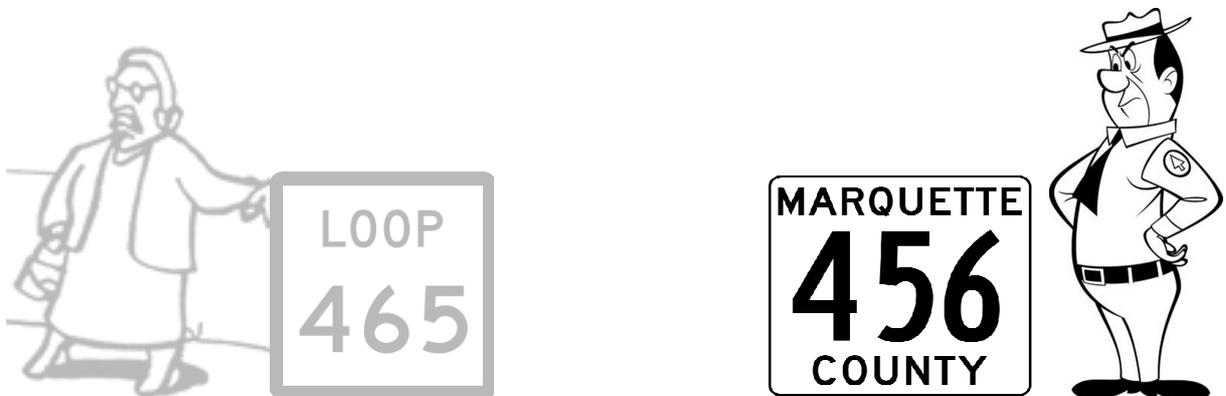
Look at the model **CLAUDIA SCHIFFER**, who appears on the front cover of more than one book. *Her* gematric value of 575 reveals itself to be another glorious combination: $61 + 196 + 61 + 196 + 61$. (Sixty-one is the centred hexagonal number of five, while one hundred and ninety-six is the square of fourteen.)

Look at the Turkish dancer **ASENA**. *Her* gematric value of 157 reveals itself to be another glorious combination: $51 + 55 + 51$. (Fifty-one is the pentagonal number of six, while fifty-five is the triangular number of ten.)

Look at the Czech actress **KAROLINA KURKOVA**. *Her* gematric value of 1152 reveals itself to be another glorious combination: $576 + 576$. (Five hundred and seventy-six is the square of twenty-four.)

Look at the Turkish dancer **TANYELI**. *Her* gematric value of 995 reveals itself to be another glorious combination: $465 + 65 + 465$. (Four hundred and sixty-five is the triangular number of thirty, while sixty-five is the stellate number of five.)

Nine ladies in a row! That should keep the feminists happy. But in case they want a token male, here is Yogi Bear’s great enemy, **THE RANGER** (below, right).



His gematric value of 456 reveals itself to be another glorious combination: $100 + 256 + 100$. (One hundred is the square of ten, while two hundred and fifty-six is the square of sixteen.) I wonder what the number 465 stands for.

Look now at the Finnish actress ANSA IKONEN, who died in 1989. *Her* gematric value of 346 reveals itself to be another glorious combination: $78 + 190 + 78$. (Seventy-eight is the triangular number of fourteen, while one hundred and ninety is the triangular number of nineteen.)

Look at the Russian ballerina NATALIA MAKAROVA. *Her* gematric value of 905 reveals itself to be another glorious combination: $400 + 105 + 400$. (Four hundred is the square of twenty, while one hundred and five is the triangular number of fourteen.)

Look at the American saxophonist MINDI ABAIR. *Her* gematric value of 215 reveals itself to be another glorious combination: $100 + 15 + 100$. (One hundred is the square of ten, while fifteen is the triangular number of five.)

Finally, look at the Turkish dancer YASEMIN KOZANOĞLU, whom you once saw performing in Istanbul. A large signed photograph of Miss Kozanoğlu is hanging on your cousin's wall. *Her* gematric value of 2233 reveals itself to be yet another glorious combination: $576 + 1081 + 576$. Five hundred and seventy-six is the square of twenty-four. One thousand and eighty-one is the triangular number of forty-six. (It is also the gematric value of BILLY BUDD, whether Herman Melville knew it or not.)

As you recall, the name of ROSIE DARTE STONE has a gematric value of 979. It is possible to express the gematric value of Rosie's three names as a combination: $225 + 529 + 225$. (Two hundred and twenty-five is the square of fifteen, while five hundred and twenty-nine is the square of twenty-three.)

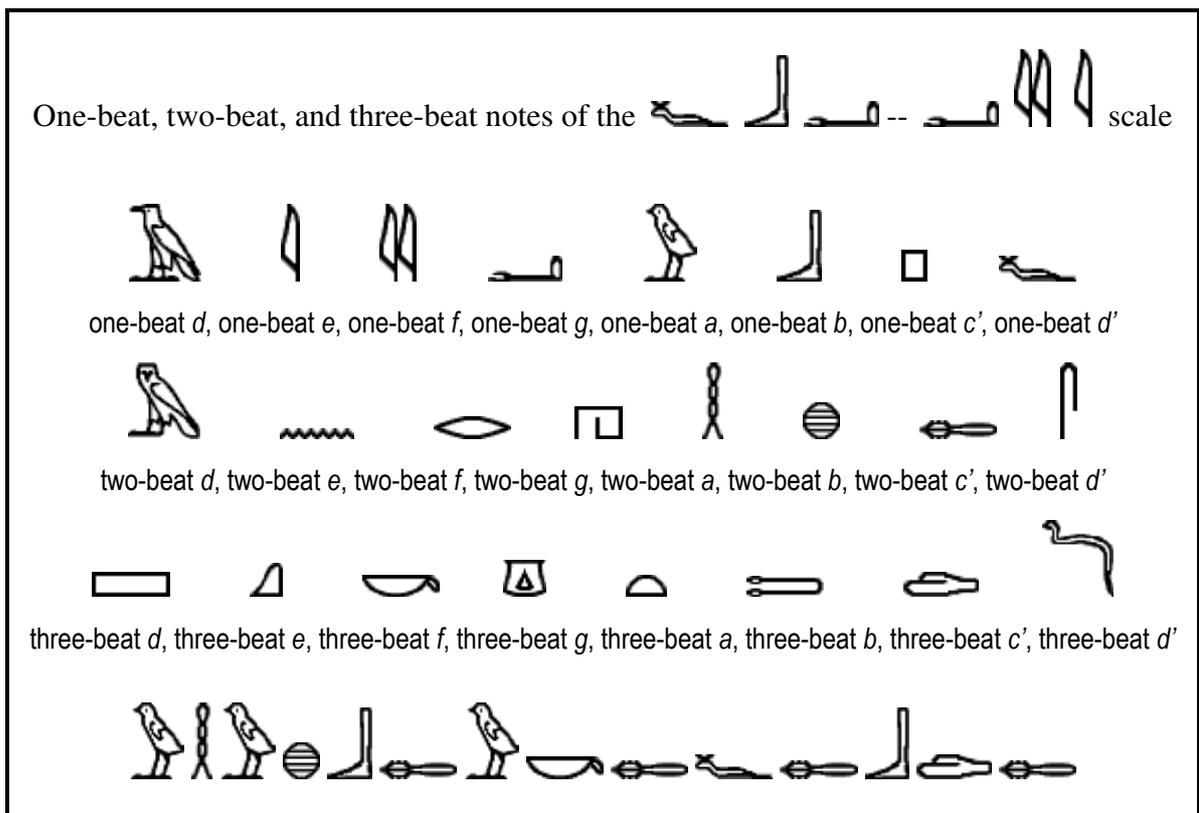
Of course the three squares of the Roseate Gematria represent nothing more than a bit of fun. We aren't saying to anyone, 'That's how your brain really sees the number nine hundred and seventy-nine.'

Let us take a break from combinations. We're sitting in a room that deserves to be described. Look around! Above the door of his study, your cousin has mounted an impressive piece of black-and-red calligraphy.

'Imagine a musical writer of cuneiform who thinks like King David,' says Adam. 'He wants to represent one-beat, two-beat, and three-beat forms of the eight notes of the 864-432 scale. What does he do? He selects characters having one, two, three, four, five, six, seven, and eight triangles! Then he makes up composite characters which denote 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8; 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 2-8; 3-1, 3-2, 3-3, 3-4, 3-5, 3-6, 3-7, 3-8. It's really very simple.'

| | | | | | | | |
|---|--|---|---|---|---|---|---|
| One-beat, two-beat, and three-beat notes of the |  | scale | | | | | |
|  |  |  |  |  |  |  |  |
| one-beat <i>d</i> , one-beat <i>e</i> , one-beat <i>f</i> , one-beat <i>g</i> , one-beat <i>a</i> , one-beat <i>b</i> , one-beat <i>c'</i> , one-beat <i>d'</i> | | | | | | | |
|  |  |  |  |  |  |  |  |
| two-beat <i>d</i> , two-beat <i>e</i> , two-beat <i>f</i> , two-beat <i>g</i> , two-beat <i>a</i> , two-beat <i>b</i> , two-beat <i>c'</i> , two-beat <i>d'</i> | | | | | | | |
|  |  |  |  |  |  |  |  |
| three-beat <i>d</i> , three-beat <i>e</i> , three-beat <i>f</i> , three-beat <i>g</i> , three-beat <i>a</i> , three-beat <i>b</i> , three-beat <i>c'</i> , three-beat <i>d'</i> | | | | | | | |

‘Before you ask,’ your cousin continues, ‘no, I’m not sure that the ancient Akkadian scribes were capable of such simplicity!’ He pauses. ‘And I fear that the archaeologist who finds something like my 54-character chart on a clay tablet will immediately pronounce it to be a votive incantation. Archaeologists have religion on the brain.’ Adam turns in his chair and points to another of his calligraphic creations. ‘*That* chart treats the twenty-four uniliteral Egyptian hieroglyphs in a more or less Davidic manner. If you like, you can treat the Greek alphabet in the same way. You’ll notice that the title uses hieroglyphs eight, six, four, four, three, and two to represent the digits of 864 and 432.’ He yawns luxuriantly. ‘At the bottom of the chart I’ve notated the first twenty-four beats of a German chorale. You’ll need to tie the last two notes.’



‘Wait a moment,’ says Adam, before we can realize his Egyptian notation. ‘When I read what you wrote in chapter 15 about the Davidic notation-system, I found it hard to believe that tau would always stand for three-beat top *d*’. Then I realized that David’s musical system was not monodic by nature, and that if you wanted to hear a one-beat *d*’ or a two-beat *d*’ you could make use of Sheminith or Alamoith.’ He pauses. ‘But listen. Suppose that an ancient Israelite psalmist wanted to have a one beat *d*’, a two-beat *d*’, and a three-beat *d*’ in his actual melody. How might he have used the Hebrew alphabet so as to represent the three different time-lengths of *d*’?’

Well, suppose that your psalmist allowed tau on its own to denote three-beat *d*’. He might well have allowed the Hebrew words aleph-tau (= object marker) and beth-tau (= daughter) to stand respectively for one-beat *d*’ and two-beat *d*’. Or he might have written his psalm so that a notational tau preceded by a purely textual aleph would denote one-beat *d*’, while a notational tau preceded by a purely textual beth would denote two-beat *d*’. Now can we sing your German chorale?

The melody of *Puer natus in Bethlehem* fills the air with geniality.

From a shallow drawer your cousin produces a chart of twenty-nine Ugaritic characters. Whereas the twenty-four uniliteral Egyptian hieroglyphs allow Adam to represent one-beat, two-beat, and three-beat forms of the pitches *d e f g a b c' d'*, the twenty-nine Ugaritic characters allow him to represent the pitches *d# f# g# a# c#* in addition.

Taking advantage of the new atmosphere, I recommend that you forget about the whole matter of figurate 'combinations'.

But we mustn't treat your cousin's doctrine with disrespect. He may be able to help me with the study of memes.

'Do you really believe in memes?' asks one reader in surprise.

Oh, yes! That is, I believe in *verbal* memes. I'll tell you what I mean in a moment.

Modern English usage displays a number of virulent horrors. It is possible that their virulence has something to do with subconscious gematria.

See if Adam will agree to join us on a linguistic ghost-train.

'You're asking me to *help* you,' he says in surprise.

Yes, you reply pleasantly.

(If he had been an enemy of the English language, your cousin would have accused us of TASKING him to help us.)

'But you don't believe in subconscious gematria,' Adam says bemusedly. 'What do you want me to do?'

Something fairly simple, you answer. Help us to investigate certain horrors of modern English usage.

'Very well,' says your cousin. 'Of course I may be wickedly unhelpful. Don't be surprised if I interpret everything in terms of the Blessed Angelina Jolie. You two gentlemen have annoyed me.' Adam folds his arms. 'Begin.'

Right! Here goes.

Whenever you get home, you unlock the door with a KEY.

Whenever a sailor gets home, he stands on a QUAY.

Why should one word be less employed than another?

Let's get into the habit of using the word QUAY so as to connote some desirable form of home base.

You will find our student accommodation unbelievably QUAY.

We can go on to use the word QUAY in the general sense of a point which people may desire to reach.

Graduation is enormously QUAY to your whole student experience.

Do you think that I've cracked up?

Then look at thirty-three pieces of *quasi-language* which I came across recently

Each one includes the combination of an adverb with the word KEY.

And each one represents a writer's deliberate choice of words.

1. I also think this is immensely key.
2. Word of mouth is enormously key to reaching new customers.....
3. Genuine flexibility is also tremendously key.....
4. What really makes Beckett so hugely key for you?
5.the reason why it should be vastly key to obtain.....
6. He even lost two immeasurably key defensive rebounds.....
7. The next hire will be unbelievably key.
8. That goal differential is incredibly key because.....
9. It is gigantically key to have the right people working for you.....
10.a random failure knocks out some reasonably key component.....
11. The emancipation of the serfs was an extraordinarily key event.....
12.building relationships is extremely key in corporate life.....
13. This is particularly key when the processes are automated.....
14. importantly key areas of study will offer students.....
15.announced four impressively key endorsements yesterday.....
16. This is an amazingly key action for him to take.
17.America is in a uniquely key position.....
18.its essentially key rôle in resolving ethnic conflict.
19. They have lost Nesta and De Rossi, both majorly key players.
20. Compound terms play a surprisingly key rôle in the company.....
21.political dialogue is intrinsically key to agenda-setting.....
22. brings together several pieces of masterfully key work.....
23.at a magnificently key moment near the end of the film.....

24. This is a terribly key moment for Charles.
25. a deceptively key player in the overall game.....
26.Florida played a painfully key rôle in the process.....
27.I reckon he'll get a shot in some moderately key spots.....
28. in this minor, but marginally key rôle.
29.to deal with intensely key problems in economics.....
30. generally ignorant of these profoundly key doctrines.....
31. The urgently key measures to improve our administrative practice.....
32.some of them do appear in memorably key scenes.....
33. Each one of these girls is desperately key.

Forty years ago it would have been unimaginable for anyone to describe things or persons as immensely key, hugely key, vastly key, immeasurably key, gigantically key, majorly key, masterfully key, magnificently key, painfully key, profoundly key, urgently key, and desperately key.

'What's the problem?' asks Colin Tate. 'Your examples represent merely a change in the narrative of language.'

Wrong. They represent a vile corruption of language that no real writer will tolerate. In fact, the modern obsession with the word KEY betokens an epidemic fluke infection of the human brain. Don't talk about 'the narrative of language'. You may as well talk about 'the narrative of manure'. Gaaahhh! Modern abusers of the word *narrative* always cause an old Icelandic song to sound in my mind.

*Narri, ef þú narrar mig,
Narri skaltu heita.
Narrar allir narri þig,
Narrinn allra sveita.*

You fool! If you call me a fool,
You'll be called a fool yourself.
All fools would take you for a fool:
You're a fool wherever you go.

'Very good,' says Adam. 'Now listen. I looked at the word KEY a couple of weeks ago. In 800 English gematria, KEY adds up to seven hundred and twenty-five.' He pauses. 'That makes a rectangle of twenty-nine by twenty-five. Not what you'd call a figurate number.'

Colin Tate seems highly pleas'd, like Death in *Paradise Lost*, and grins horrible a ghastly smile.

'Mind you,' Adam goes on, 'seven hundred and twenty-five is twenty-nine times twenty-five, which is the square of five.' He pauses. 'Seven hundred and twenty-five is also five times one hundred and forty-five, which is the pentagonal number of ten.' Your cousin sets an elegant piece of calligraphy on the table.



Also on the table is *Pot's Tearing Aggressive Lays*, a ninety-page paperback anthology of 'ceramic and polemic verse' by Grace Prentice. *PTAL* has been published with the help of a grant from some local arts body, and yet it manages to cost the equivalent of \$20. The fifth Elsie, clad in multicoloured potsherds and holding an AK-47, appears on the front cover. There's glory for you!

What were we doing? Not sparing obsessive keys. Let me thank Adam for giving us a serious reply. (There is no research without negative answers.) You ask me if I have another piece of corruption to discuss. Yes, I have. One of the most overused English words is THIS, the demonstrative adjective or pronoun.

There are some short words that can be unpleasant in themselves, and THIS is one of them. At times its sibilant close becomes a vehicle for censure or even scorn. (Often a disapprover begins with the hackneyed words, 'I hope that this....'.) You tend to think of THIS as rhyming with HISS rather than with BLISS.

Apart from its sound, THIS is a very strong word. When you use the word THIS, *you point your linguistic finger*. If that gesture is to retain either meaning or strength, you must not point your linguistic finger with excessive frequency.

You should therefore try to use the word THIS no more than once in a single paragraph. Certainly you should never use it twice in a single sentence. To use the word THIS on both sides of a comma, as many writers are content to do, represents a contempt for both elegance and common sense.

Look at nine pieces of *quasi-language* which I came across recently.

1. Because of this, this is not an easy book to digest.
2. Because of this, this is an architect's book.....
3. Because of this, this is a really exceptional movie.....
4. Because of this, this is basically a four or five person game.....
5. Because of this, this may be the best time to assess.....
6. Because of this, this is not a negative release.....
7. Because of this, this is an almost universal concept.....
8. Probably because of this, this is the last episode of the series.....
9. Precisely because of this, this is an affirmation.....

Here's a demonstrative three-wheeler which deserves a Special Booby Prize.

Because of this, this is beyond the scope of this report.

Your cousin rises to his feet, and walks over to a bookcase near the window. When he comes back he sets an open volume on the table, and points to one passage. 'Behold,' he says. 'An awful piece of academic writing. Five uses of the word THIS, in three consecutive sentences.'

THIS work aims at giving, so far as is possible, a literal translation into English of the Hebrew text of Rashi's commentary on the Pentateuch. For THIS reason no striving has been made after elegance of diction, and in all cases THIS has been sacrificed, and frequently ruthlessly so, to the needs of literalness. THIS has inevitably led in many instances to some obscurity, and where THIS is so explanatory words have been added within brackets.

Your cousin continues. 'I was thinking about the word THIS on Saturday. In the 800 English alphabet, it adds up to three hundred and seventeen. Once again, not what you'd call a figurate number.' He pauses. 'Is there one more piece of corruption that we can look at before I go to the gym?'

Yes! Let us consider the most overused of all English vocables: the word JUST. At times JUST means 'merely'. At other times it means 'simply'. But usually it means NOTHING WHATEVER. Some people whose work involves a lot of talking manage to use the word JUST more than a thousand times every day.

You should try to use the adverbial word JUST not at all, and certainly no more than once in a single page. Certainly you should never use it twice in a single paragraph. Those people who use the word JUST twice in a group of five or six syllables have allowed their minds to be colonized by a detestable parasite.

Look at twenty-four pieces of *quasi-language* which I came across recently.

1. I just thought I'd just relay that interesting piece of information.....
2. I just thought I'd just stop by to say we wish you all the best.....
3. I just thought I'd just make you aware that.....
4. I just thought I'd just send out a little message here.
5. I just thought I'd just drop a line to tell you that.....
6. I just thought I'd just forget about the whole thing.....
7. I just thought I'd just say that this affects your cousin.....
8. I just thought I'd just pass on a bit of news.....
9. I just thought I'd just let you know that the code is no longer.....
10. I just thought I'd just take it and try it out.....
11. I just thought I'd just skip the meeting.
12. I just thought I'd just say I've enjoyed reading the book.....
13. I just thought I'd just share my opinion of.....
14. I just thought I'd just post a few short comments.
15. I just don't want to just talk about the project.

16. I just don't want to just paint another picture.....
17. I just don't want to just sit around the office.....
18. I just don't want to just show respect to other people.....
19. I just don't want to just at the moment, thanks.
20. I just don't want to just get a single example.
21. I just can't seem to just let go of the idea.
22. I just don't just have time to deal with it on my own.
23. I just don't just mean a romantic candlelit dinner.....
24. I just don't just think about the birds.....

The last three examples are in a class of their own. Each one contrives to use the word JUST twice *in a group of only four syllables*. But we'll allow the following pair of three-wheelers to share a Special Booby Prize.

I just thought I'd just spend a moment on this just to explain.....

I just don't just try to listen to just one song.

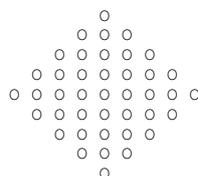
'I was thinking about the word JUST yesterday,' says your cousin. 'In the 800 English alphabet, it adds up to six hundred and ten. Once again, not what you'd call a figurate number.'

Riding a charade-bicycle made of three pencils, our host escorts us to the vestibule door, and takes his stand on an old Lakai carpet.

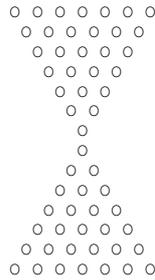
'Not everyone knows where I've *been*, and not everyone knows what I've *seen*,' he says mysteriously. 'Of course I've overstated my own doctrine. Please do realize that it applies only to particular cases. And please don't try to see everything in terms of the 400 English alphabet.'

Four sparrows are singing merrily in the garden.

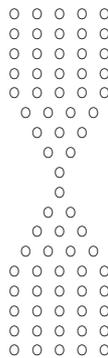
Your cousin continues. 'Many ordinary people seem to think in terms of *the 26 English alphabet*. They also appear to savour *mirror images*, whether you boys like the idea or not.' He drops his three pencils on the Lakai carpet, and produces a card. 'Look at the word KEY in 26 gematria. KEY adds up to forty-one, which is the sum of the squares of four and five. Any such number -- that is, any sum of two consecutive squares -- may be arranged in the form of what is called a *centred square number*.'



‘Now look at the word THIS,’ your cousin continues. He produces a second card. ‘THIS adds up to fifty-six, or to a double triangular number of seven.’



‘And before you go,’ says your cousin, ‘look at the word JUST.’ He produces a third card. ‘JUST adds up to seventy, or to a double pentagonal number of five.’



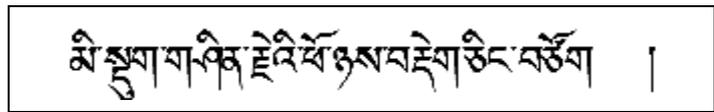
‘One more thing,’ adds your cousin. ‘Never ignore the *sound* of words. I mean to say, the word COOL has a delightful *sound*. No hateful hisses or hushes about it.’ He grimaces. ‘Weak-minded people delight in sibilation. For no reason they turn the E of RIGHTEOUS into a detestable great ess-aitch. By contrast, intelligent people say ANGLOPHONE. Why do they use that word? Because ENGLISH-SPEAKING is such a horrible sibilant mouthful.’

Your cousin picks up his three pencils. ‘Don’t get the idea that language is all letters and numbers! Sound is important as well.’ He sighs theatrically. ‘Some of the men who preach in my church murder their words when they speak. They refer to the Biblical books of *Zachariah* and *Philip lans*. They describe a person who comes from Phoenicia not as a *Pheenishan*, but as a *Phineeshan*. They say *keeng* for *king*, and *day-ity* for *dee-ity*. They call Esther’s guardian *Mordekiah*.’ Adam pauses. ‘Even when they manage to pronounce their words properly, these men make war on language and reason. One of them tells us to perform our various duties *carefully and prayerfully*. Another one torments us with the *clearly-dearly-nearly* formula whenever he comes to pray. And the very worst of them abuses us with pieces of aphoristic absurdity. Like, *When you point one finger at another person, you’re pointing four fingers back at yourself*. What MINDLESS BOOBY contrived to create such a preposterous proverb? When you use your index finger to point at another person, you can point your thumb back at yourself only if you are hideously deformed. Furthermore, the fact that the first and second joints of your second, third, and fourth fingers are in some sort pointing back at yourself means NOTHING. Suppose you point to a pregnant lady, and declare that she will soon be giving birth to a child. Your act of pointing doesn’t indicate that you yourself will soon be giving birth to triplets. Or suppose

you point to a sea-going gentleman, and declare that he is the owner of a yacht. Your act of pointing doesn't indicate that you yourself are the owner of a trimaran. Don't start me!' For a moment Adam regards with pride his own awful painting of the Kremlin clock-tower. 'Linguistic disease is virulent in the church of today. I mean, you can find horrors in the language of modern hymn-writers. One of them wants us to be *steely-eyed*. A second one talks about what we all do while we're *standing here in the midst of us*. And a third one believes that a diadem is something which a king *holds in his hand*. Then you have the syncopators from the pop world, who protract unimportant syllables in the most *witless* manner. Their weak and shapeless melodies consist entirely of tied notes. Someone help me. Why is the Christian music of today so frightful?'

We say goodbye to Adam. You go off to collect Rosie from her studio, and Colin Tate gets into a waiting car. It really is a wonderful evening. The hills are sitting out against an apple-green sky like newly cut amethysts. For about three minutes I stand in front of Adam's gate, intoxicated by the fragrance of a nearby garden fire. The air is pleasantly cold. I feel sorry for people who need alcohol.

At length there appears a small eight-year-old vehicle. Its aura of honest utility rebukes the drivers of minibus-jeps who poison the air with their black filth. Miss Benn has come to take me for a Chinese dinner not in the Kremlin, but in the town of Crumlin, which has a clock-tower of its own. Gratefully I get into the car. Delia is wearing green gloves. Without speaking, she hands me a strip of paper.



That's Tibetan, I observe brilliantly. What does it say?

'*Miduk shinjey poney dekching tsok,*' says Miss Benn. 'The hideous messengers of the Lord of Death beat and stab us. What I mean is, I've spent the afternoon helping Lettuce Girl to look after a crèche. Oh, and the fifth Elsie was there as well. Her name is Greta.' Delia moves off. 'I learned so much today! Greta is a research student in the art college. Two nights a week she models in her own home for the undergraduate students -- secretly, and for a moderate fee. Why? Because you aren't allowed to paint women in the art college. If you insist on doing so, you are accused of *scopophilia*, and punished at exam-time. It's unbelievable. Most of the college staff are "conceptual artists" who worship the Emperor's New Clothes. Some of them worship the Emperor's Filthy Old Bedclothes. I mean, one lecturer specializes in the sonic phenomena of public lavatories. Well! Greta is rebelling. Whittaker's four friends have stopped speaking to her. I told Greta that you would paint her, dear.' Delia pauses. 'Ooohhh! I'm glad to get away from those Killer Babies. Lettuce Girl and Greta and I kept ourselves sane by writing a parody. We plunged into the crucible of language, and turned "Desiderata" into a spoken duet. I'll let you see it tonight.'

Whenever I read 'Desiderata' I seem to hear the humming of a patriarchal cretin. Ehrmann has written a piece of pretentious drivel which at one point blasphemes the God of glory. It horrifies me that many Christians speak of 'Desiderata' with respect. I'm glad that Delia, Jane, and Greta have been led to destroy a thing of evil. Turn the page, and ask yourself: whose text is more nonsensical?

Two-part invention: DEAD SATIRE and DESIDERATA

(for a lady and a gentleman to read aloud at the same time)

Throw acid if Madrid annoys your taste, for December brought Greece the
Go placidly amid the noise and haste, and remember what peace there.
Euboean island. In Saragossa or devout Sorrento, Beaverbrook
may be in silence. As far as possible without surrender be on good
yearns for ball-bearings. Teach a couth piety in theory, and whistle in
terms with all persons. Speak your truth quietly and clearly; and listen to
gutters, leaving the gull to eat liquorice; say Boo in Andorra. If Freud vowed
others, even the dull and the ignorant; they too have their story. Avoid loud
to address inertia, play with Ignatius and his ferret. Sinews impair
and aggressive persons, they are vexations to the spirit. If you compare
forensic lovers; you pray for some Wienerschnitzel, though Galway
yourself with others, you may become vain and bitter; for always
merrily caters for kestrels perching on a shelf. Eat oysters and
there will be greater and lesser persons than yourself. Enjoy your a-
cheeses with melons in France. Deep winter wrestles with maroon veneer, and
-chievements as well as your plans. Keep interested in your own career, how-
leather crumbles, but an ideal recession will endanger orchards of lime.
-ever humble; it is a real possession in the changing fortunes of time.
Factorize autumn in Parisian éclairs, or the girls will pull your chicory.
Exercise caution in your business affairs; for the world is full of trickery.
Alcestis thought kindly of what Hercules did; when affairs connive at
But let this not blind you to what virtue there is; many persons strive for
wide-eyed evil, a debonair wife induces herbalism. Flee the
high ideals; and everywhere life is full of heroism. Be your-
Celt. The flesh of a doughnut drains infection. Try to be clinical as a dove;
-self. Especially do not feign affection. Neither be cynical about love,
Coriolanus calls for Lydia, and mystic dancers like Mrs Penelope
for in the face of all aridity and disenchantment it is as perennial
have a glass. Brake-linings announce that in Algiers, racing will
as the grass. Take kindly the counsel of the years, gracefully
engender a delinquent tooth. Birds of extra merit are healed in sunny
surrendering the things of youth. Nurture strength of spirit to shield you in sudden
Minorca. Adonis impressed Imelda's dour coadjutant. Grenadiers
misfortune. But do not distress yourself with dark imaginings. Many fears
who mourn for the league are onerous. Be fond of golden hyssop, and invest
are born of fatigue and loneliness. Beyond a wholesome discipline, be gent-
at six per cent. Glue on the gliders of Jupiter oppresses the seasonal
-le with yourself. You are a child of the universe, no less than the trees and the
charge; fuel has heightened their fear. The cleverest thoughts are imperial; throw
stars; you have a right to be here. And whether or not it is clear to you, no
out the junipers who are bolder than the wood. Rare Korean geese
doubt the universe is unfolding as it should. Therefore be at peace
applaud when revellers are leaving Dundee. Your malevolent neighbours and
with God, whatever you conceive Him to be, and whatever your labours and
mad relations may enjoy an unmusical life: sheep-fleeces are droll. Symbolic
aspirations, in the noisy confusion of life keep peace with your soul. With all its
ham, kedgerie, and local bream are distilled by dutiful nerds. Eat spearmint.
sham, drudgery, and broken dreams, it is still a beautiful world. Be cheerful.
Drive a jalopy.
Strive to be happy

CHAPTER 23: A TABERNACLE FOR THE SUN

*Idź dokąd poszli tamci do ciemnego kresu
po złote runo nicości twoją ostatnią nagrodę*

(= Go to the dark limit, where those ones went,
for your final reward: the golden fleece of nullity).

Zbigniew Herbert

*Neun Kühe sind die andern, Er der Bulle;
Die Ziffer Er, und sie die Nulle.*

(= The others are nine cows: he is the bull;
He is the real number, and they are zeroes).

Ludwig Heinrich von Nicolay

.....the rebellious roar of the raging nothing.....

Amanda McKittrick Ros

白 日 依 山 盡

(= White sun, following mountain, ends).

Wang Zihuan

As I drive along an icy road in March, I'm wondering about Er. Does the Hebrew *Er* of Genesis 38. 3-7 (ער: spelled Hp in the Septuagint) become the Pamphylian *Er* of Plato's *Republic* 10. 614-621 (also spelled Hp)? Does Tamar becomes Mother Necessity? Do the staff, ring and bracelet which Tamar takes from Judah become the staff, hook and round weight of Mother Necessity's spindle?

When I turn left on to a main road I meet the blinding spring sunlight head-on. After a moment I begin to wonder about the 'great lights' of Genesis 1. 16.

ויעש אלהים את שני המארת הגדלים

And God made two great lights;

את המאור הגדל לממשלת היום

the greater light to rule the day,

ואת המאור הקטן לממשלת הלילה ואת הכוכבים

and the lesser light to rule the night: he made the stars also.

Something is going on here. Why has Moses not used the Hebrew words for *sun* and *moon*? That question almost goes out of my head when I get stuck in slow-moving traffic. Between me and the roundabout where blue lights are flashing is a long unbroken line of country buses. I think of the word *omnibuses*, which in 800 English gematria adds up to 666. Then I ask myself two lunatic questions. First, is *booja* the plural of *boojum*? Secondly, if our English vocable *bus* was a three-letter Latin word, what would its plural forms look like? At once the melody of *Personent hodie* rides into my mind on the back of a barbarous Latin text.

Abeat, at, at,

Abeat, at, at,

Abeat subito multitudo borum

(= Let the multitude of buses disappear suddenly).

That is appalling, I know, but the revised version is even worse.

Abeant, ant, ant,

Abeant, ant, ant,

Abeant subito bucolici bures.

(= Let the country buses disappear suddenly).

An overturned gritter is blocking one lane of the roundabout. After opening the window beside me, I resolve to advance slowly. Genesis 1. 16 gives way in my mind to a stupid non-German phrase, for which may Rilke forgive me.

Greitet der Gritter.....

It is clear that someone has money to throw around. A badly split dryadic statue, which appeared on the central island last year, has been dressed in Chanel swimwear. (Some sculptors never learn. If you carve a large statue from a single block of wood, it will nearly always develop a number of splits.) Who calls to me from the right? Ha! It is Delia's old Latin tutor, Dr Pete Stodie, chairman of the local gardening club, and master of the apt quotation. His car has broken down, and he wants me to drive him home. I shall do so gladly. Dr Stodie recently purchased a portrait of La Stupenda, the magnificent green Tritoness who in civilian life is known as Cicely Grove, so it may be more than wise to give him a lift. No harm in saying it. You need to treat your clients holistically.

I *know* before the man gets into my car that he's going to point to the gritter and say, '*Quis custodiet ipsos / custodes?*'. And he does. (*Who will guard the actual guards?* That is, who will prevent gritters from overturning on the icy roads which they are gritting? Stodie is quoting correctly from Juvenal, *Satires* VI. 347-8. In the brave new Latinless world of today, even writers like Judy Anne Goth are happy to use a debauched and meaningless version of Juvenal's question: *Qui custodiet custodies?*)

Then it gets worse.

'I've been looking at Tacitus *Annals* 1. 65 with the second-years,' Stodie drawls. (Synecdoches of Schenectady! He's going to talk about *the famous passage in which Tacitus refuses to call a spade a spade.*) 'You're familiar with the chapter.'

I am.

'*Neque is miseriarum finis.*'

Struendum vallum.

'Petendus agger.'

Amissa magna ex parte per quae egeritur humus aut exciditur caespes.....

'Yes, yes, yes, of course.' Stodie shakes his head impatiently. 'It's remarkable. The famous passage in which Tacitus refuses to call a spade a spade.'

Suddenly I realize that my unwanted passenger has done me a great service.

Put on a historian's hat, and consider the 'famous passage' of Tacitus.

Neque is miseriarum finis. Struendum vallum, petendus agger, amissa magna ex parte per quae egeritur humus aut exciditur caespes.....

And that wasn't the end of their misfortunes. They had to build fortifications and find materials for the earthworks, even though they had lost most of their tools for digging earth and cutting turf.

Tacitus *could* have employed a couple of technical terms, but he wanted his readers to understand him precisely, so he used a circumlocution.

Now put on an aurelian's hat, and consider a butterfly called the Karner Blue, which Vladimir Nabokov identified as a distinct subspecies in 1943. (He named it *Lycaeides melissa samuelis*.) In the course of writing *Pnin*, Nabokov the novelist described a group of Karner blues WITHOUT NAMING THEM.

A score of small butterflies, all of one kind, were settled on a damp patch of sand, their wings erect and closed, showing their pale undersides with dark dots and tiny orange-rimmed peacock spots along the hindwing margins; one of Pnin's shed rubbers disturbed some of them and, revealing the celestial hue of their upper surface, they fluttered around like blue snowflakes before settling again.

Why did Nabokov refuse to invade his own heavenly picture of the butterflies? Because he was a modest man? No. Because he was a sublime artist. And hereby hangs a reflection, which I'll express in English vocables. Tacitus had a good reason for not saying 'turf-spades'. Nabokov had a good reason for not saying 'Karner blues'. And Moses had a good reason for not saying 'sun'.

Hold on, you say. What's wrong with the sun?

Nothing, so long as you treat it carefully. But many people have been programmed by consuetude to make certain responses in particular circumstances WITHOUT THINKING. Let me give you two examples of what I mean. When I say in the course of an evening lecture, 'President Lincoln was murdered by John Booth,' some of my listeners interrupt me stupidly by murmuring, 'John WILKES Booth.' Twenty minutes later I draw the hexagon-based dodecagonal number of four on the whiteboard, and an intelligent lady asks, 'Is that the star of David?'

'Only in the world of recent notions,' I reply. 'David didn't have a 73-counter star, and to speak of *the star of David* is to use an unBiblical expression.'

At five past nine I'm getting into my car when I hear the intelligent lady telling her friend across the street, 'That really *was* the star of David, you know.'

DASH IT ALL, A MAN ISN'T SAFE EVEN IN BELGIUM.....

One summer day the third Elsie came over to me when I was reading *Aeneid* VII in paradise, or rather in the Leuven Botanic Garden. Would I translate a piece of Guanche text for him? Guanche is the original language of the Canary Islands.

Achoron nun habec sahagua reste guagnat sahur.....

I replied sleepily that the piece of text invoked God (= *Achoron*), and that it had something to do with subject peoples defending the community. Well, that was all right. Then my interlocutor noticed line 312 of *Aeneid* VII.

Flectere si nequeo superos, Acheronta movebo

(= If I cannot bend the heavenly gods to my will, I shall move Acheron [= Hell]).

At once the third Elsie had a revelation. *Achoron* was the same as *Acheron*.

‘Some people see only what is in their own minds,’ says Lettuce Girl. ‘I used to know a solemn cellist from Poznan called Joale who longed to be a scholar. Poor Joale thought that everyone was a fascist. She once translated the French proper noun *Gobelins* into Polish as *Goebbels*.’

That tale reminds me of a *Muppet Show* vignette which I have already mentioned.

POIROT Listen carefully. You are thinking of *Hercules*.....

PASSENGER 1 Mmm.

POIROTan ancient demigod from Greek mythology. I am *Hercule Poirot*, a fictional Belgian detective.

PASSENGER 2 But how do you hide your rippling muscles under that puny little waistcoat?

POIROT I do not think it is possible to overemphasize what I am about to say. I am NOT Hercules!

PASSENGER 2 [to friend] Oh, I get it. He’s working undercover.

PASSENGER 1 Ssshhh! Don’t get him mad! He’ll rip up the train-tracks, and tie them round your neck!

Now attend. Once upon a time, in the ancient Near East, lots of people believed in a god called Shamash. (He didn’t exist, but they still believed in him.) Shamash was identified with the sun, and he was imagined by many to be the offspring of the moon.

On the left below you can see the name of Shamash, spelled in Hebrew letters (shin-mem-shin). On the right you can see the Hebrew word for ‘sun’ (*shemesh*).

ש ש ש

ש מ ש

If Moses had used the word shin-mem-shin in Genesis 1, some of his readers would wrongly have thought, ‘Ooohhh! He’s really talking about *Shamash*.’

Consuetude is often a crippling thing. It can make you think that if you mention certain persons without saying their middle names, you’re committing an act of indecency. It can make you believe that a 73-counter number is really ‘the star of David’. And you don’t need to be told what it does to the Muppets. (‘I am NOT the mythical demigod Hercules.’ *We know better. You ARE Hercules.*)

I'll say it again. If Moses had used the word SHEMESH in the first chapter of Genesis, some of his readers would have thought, 'Oh, we get it. Moses is talking about the sun-god SHAMASH.' That's why you don't meet the word SHEMESH in the book of Genesis until you get to verse 12 of chapter 15.

Some readers find what I'm saying about Shamash hard to believe. They should consider how certain modern commentators have chosen to construe the word תהום (tau-he-wau-mem: *tehom*) in Genesis 1. 2. Does *tehom* mean 'the deep'?

וַחֹשֶׁךְ עַל פְּנֵי תְהוֹם (= and darkness was upon the face of THE DEEP)

'No, no,' the commentators say. 'You don't understand. The word *tehom* really denotes *the Wise Creatrix Tiamat*, whom we meet in *Enuma Elish* 1. 4.'

𐤎𐤌𐤍 𐤎𐤌𐤍 𐤎𐤌𐤍 𐤏𐤌𐤎𐤍𐤎 *mu um mu Ti amat*

Is that true? Let me ask a question which few scholars ever ask. Why do we not meet the word *tehom* again in Genesis until we get to verse 11 of chapter 7? The idea of Tiamat making a cameo appearance in Genesis 1 is perfectly surreal. (Reminds me of a song by Central Services called 'The Lonely Tomato'.) It is more reasonable to suggest that two words in Genesis 1. 1 (אלהים and השמים: *elohim* and *hashshamayim*) sonically acknowledge the words 𐤎𐤌𐤎, 𐤎, and 𐤎𐤌𐤎 (elish, la, and shamamu) in *Enuma elish* 1. 1. Note that three-syllable בראשית (*bereshith*) begins with ב and is followed by two-syllable ברא (*bara*), which also begins with ב, exactly as three-syllable 𐤎𐤌𐤎𐤎 (enuma) begins with 𐤎 (e) and is followed by two-syllable 𐤎𐤌 (elish), which also begins with 𐤎 (e).

No Christian should have any problem with such an urbane pair of acknowledgements. I mean to say, literate authors often acknowledge their predecessors. Let me give you a few examples. In the first line of the *Aeneid*, which begins *Arma virumque cano* (= I sing of warfare and of the man), Vergil salutes Homer by alluding both to the first line of the *Iliad* (Μηνιν αἰοδε, θεα = Goddess, SING of the anger) and to the first line of the *Odyssey* (Ἀνδρα μοι, εννεπε, Μουσα = Muse, tell me about the MAN). In the first line of *The Lusians* (*As armas e os barões assinalados* = The arms and the matchless heroes), the Portuguese poet Luís Vaz de Camões imitates the first line of the *Aeneid*. In the first line of *Eugene Onegin* (Мой дядя самых честных правил = *My uncle is a man of noble principles*), Pushkin echoes the words of a fable by Krilov (Осел был самых честных правил = *The ass was a creature of noble principles*). For his part Li Bai (below, left) pays a notable tribute to Meng Haoran (below, right).

對酒不覺暝
face wine NOT AWARE darkness
落花盈我衣
FALLING PETALS cover my robe
醉起步溪月
drunk rise walk stream moon
鳥遠人亦稀
BIRDS far humans also few

春眠不覺曉
spring sleep NOT AWARE morning
處處聞啼鳥
everywhere hear warbling BIRDS
夜來風雨聲
night came wind rain music
花落知多少
PETALS FELL know how many

Furthermore, the Greek word *ταρταρωσας* (= cast into Tartarus), which appears in II Peter 2. 4, draws its meaning from things like the mythical *Ταρταρος* of *Iliad* 8. 481 and the mythical *Tartarus* of *Aeneid* VI. 577. [We'll see in chapter 26 how a real number may be generated when the imaginary unit is raised to the power of itself.] The Biblical authors are not timorous. St Luke is prepared to mention the mythical *Διοσκουροι* (= Castor and Pollux) in Acts 28. 11. Whatever puritanical haters of culture choose to believe, even an inspired writer is at liberty to be literate. But he is not at liberty to mention, for some frivolous reason of his own, a character who plays no part in the story, and who will not be appearing again.

Ask yourself whether Moses has behaved frivolously. Has he brought Tiamat into Genesis 1. 2 merely so as to have a feminine presence at the start of his tale? If so, he deserves to be rebuked as Wagner was rebuked by Nietzsche.

Nehmen wir den Fall, dass Wagner eine Weiberstimme nöthig hat. Ein ganzer Akt ohne Weiberstimme -- das geht nicht! Aber die "Heldinnen" sind im Augenblick alle nicht frei. Was thut Wagner? Er emancipirt das älteste Weib der Welt, die Erda: "Herauf, alte Grossmutter! Sie müssen singen!" Erda singt. Wagner's Absicht ist erreicht. Sofort schafft er die alte Dame wieder ab. "Wozu kamen Sie eigentlich? Ziehn Sie ab! Schlafen Sie gefälligst weiter!" -- In summa: eine Scene voller mythologischer Schauder, bei der der Wagnerianer ahnt.....

Let's consider what happens when Wagner needs a female voice. A whole act *without* a female voice? That won't work! But all the 'heroines' are occupied at the moment. What does Wagner do? He liberates Erda, the oldest woman in the world. 'Up you get, ancient grandmother! You have to sing!' Erda sings. As soon as Wagner has achieved his purpose, he sends the old lady straight back to bed. 'Whatever prompted *you* to appear? Clear off! Carry on sleeping, if you don't mind!' The result is a scene full of mythological terrors, one which arouses *foreboding* in the Wagnerian.....

Think. Why does Moses the monotheist take care not to use the word *shemesh* in the opening pages of his tale? So that no reader will start thinking stupid thoughts about a mythical god called *Shamash*.

Think again. Is it likely that Moses the monotheist will allude to a mythical goddess called *Tiamat* in the second sentence of his tale, and then send the old lady straight back to her mythical bed? No, it is not.

When you read a text, don't go hunting for proper nouns that aren't there.

The following lines do not allude to the American composer Jeremy Borum.

*Abeat, at, at,
Abeat, at, at,
Abeat subito multitudo borum.*

The following lines do not allude to the English village of Bures.

*Abeant, ant, ant,
Abeant, ant, ant,
Abeant subito bucolici bures.*

And the following phrase does not allude to the religious writer George Gritter.

Greitet der Gritter.....

A short time ago I asked you to look at a passage of TACITUS, and then to put on the hat of an AURELIAN (= lepidopterist). I was alluding neither to the Roman emperor AURELIAN nor to Marcus Claudius TACITUS, who was elected to the purple in 275 AD, after the murder of Aurelian.

[Why did I use the word AURELIAN? Because the word LEPIDOPTERIST is rather less euphonic. Every sentence that I write I read aloud. Language is not merely a matter of symbols written on a page! Sound is important as well. Have you never yet thought about the importance of linguistic sound? Then start thinking about it now. Often I have taken a whole hour to get one sentence right, and a whole day to get one paragraph right. More than once I have taken a whole week to get one page right. Those who watch television for four hours every night will rebuke me for my prodigal use of time, but if I'm going to appreciate the diligent craftsmanship of ancient authors like Moses and David, I must listen carefully to the sound of my own written words. Here's the corollary. A person who is content to write ugly prose deserves only to be ignored when he presumes to explicate a piece of finely crafted literature.

People need to treat language with respect. Last night in a dream I shot dead a waitress who dared to use the verb ENJOY, in its imperative mood, *intransitively*.]

Let me allude once more to Borum, Bures, and Gritter, the celebrated trio of oneiric lexicographers. When a scholar allows his ingenuity to ride on the back of his ignorance, he may saddle some innocent old text with a fatuous proper noun. I'll take time to give you one serious example. A medieval Latin hymn from the Icelandic *Porlákstíðir* happens to contain the following two lines.

*Aquilonis iam latera
magno regi sunt subdita*

(= Now the sides of the north have been brought under the rule of the great king).



Even a person of moderate literacy should be able to discern here a reference to verse 3 of Psalm 48 (AV, verse 2).

יפה נוף משוש כל-הארץ הר-ציון ירכתי צפון קרית מלך רב

Beautiful for situation, the joy of the whole earth, is mount Zion, on THE SIDES OF THE NORTH, the city of the GREAT KING.

Any person who presumes to study medieval Latin hymns should be familiar with the Latin Vulgate, in which Psalm 48. 2 reads as follows.

*Fundatur exultatione universae terrae mons Sion, LATERA
AQUILONIS, civitas REGIS MAGNI.*

Yet when you study the scholarly literature relating to the *Þorlákstíðir*, you meet a man who wonders if the words *magno regi* refer to King Magnús Erlingsson.

Oh, dear. That's enough! Let us return to our consideration of 'the greater light'.

The sun needs to be treated with care, and it must be given its proper place.

If we treat the sun foolishly, it will burn our skin and destroy our eyesight.

That both the literal sun and the literal moon have the power to do us harm is clear from Psalm 121. 6: 'The sun shall not smite thee by day, nor the moon by night.'

Song of Solomon 1. 6 says, 'Look not upon me, because I am black, because the sun hath looked upon me.....'

As in body, so in soul.

If we start to worship any of the heavenly bodies, including the sun, we are embarking on a course of self-destruction.

Look at Genesis 1. 14 in the AV.

And God said, Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years.....

In 400 gematria the two Hebrew words rendered 'Let there be lights' (yodh-he-yodh mem-aleph-resh-tau) add up to 666.

יהי מארת

Should that fact worry us?

Sic et non, as Abélard would say. Yes and no.

YES if we detach the two Hebrew words from their context, if we forget about the Creator who made the lights, if we ignore the distinct functions of the lights, and if we begin to worship the luminiferous creatures rather than their Creator.

NO if we read the two Hebrew words in context, if we acknowledge the Creator who made the lights, if we remember the real purpose of the lights, and if we realize that the lights are our fellow-creatures.

In Job 31. 26-28 we read,

*If I beheld the sun when it shined, or the moon walking in brightness;
And my heart hath been secretly enticed, or my mouth hath kissed my
hand: This also were an iniquity to be punished by the judge: for I
should have denied the God that is above.*

II Kings 23. 11 tells us that Josiah

took away the horses that the kings of Judah had given to the sun, at the entering in of the house of the LORD, by the chamber of Nathan-melech the chamberlain, which was in the suburbs, and burned the chariots of the sun with fire.

(I'll talk about *suburbs* in chapter 32.) Those who acknowledge the LORD as their Creator can speak intrepidly about the heavenly bodies. Moses mentions in Deuteronomy 33. 14 'the precious fruits brought forth by the sun', and 'the precious things put forth by the moon'. Deborah sings in Judges 5. 31, '.....let them that love him [= the LORD] be as the sun when he goeth forth in his might.'

Since God controls the celestial timekeepers which are his creatures, he must find it easy to affect the workings of a man-made chronometer. Isaiah 38. 8 says, 'Behold, I will bring again the shadow of the degrees, which is gone down in the sun dial of Ahaz, ten degrees backward. So the sun returned ten degrees, by which degrees it was gone down.'

The two Hebrew words rendered 'ten degrees' (ayin-sin-resch mem-ayin-lamedh-wau-tau) may mean 'back to zero'. They add up in 400 gematria to 1116.....

עשר מעלות (= ten degrees)

.....which is the total gematric value of Ecclesiastes 1. 2.

הבל הבלים אמר קהלת הבל הבלים הכל הבל

(= Vanity of vanities, saith the Preacher, vanity of vanities; all is vanity.)

One message of the *preceding* verse is that the gematria of the whole book is based exclusively on the 400 Hebrew alphabet. Ecclesiastes 1. 1 adds up in 400 gematria to 1495, which is the total numerical value of the 400 alphabet.

דברי קהלת בן דוד מלך בירושלם

(= The words of the Preacher, the son of David, king in Jerusalem.)

Why am I talking about Ecclesiastes?

Because it is the Biblical book which mentions *the sun* most often.

It is also the Biblical book about which most nonsense has been written. Ecclesiastes is not an existentialist picture of life on earth! It is a description of hell, written by a man called Solomon who, having pursued the most assiduous researches into evil, was allowed to visit the place in a vision. Solomon was so horribly affected by the experience that when he got out he wasn't sure for a while whether he had really got out or not.

'Don't be stupid,' says one of the Muppets who tormented Hercule Poirot. 'Hell belongs to the afterlife, and the ancient Israelites didn't believe in an afterlife.'

Wrong. Read Job 19. 25-27.

For I know that my redeemer liveth, and that he shall stand at the latter day upon the earth: And though after my skin worms destroy this body, yet in my flesh shall I see God: Whom I shall see for myself, and mine eyes shall behold, and not another; though my reins be consumed within me.

‘That’s very poetic language,’ says another Muppet. ‘But it changes nothing. We all know that the ancient Israelites didn’t believe in an afterlife.’

It’s hard to argue with felt-headed creatures who can say only what they have been programmed to say.

MUPPET There is no such thing as a brick.

(Author presents Muppet with a real brick.)

MUPPET That’s a very poetic object. But it changes nothing. We all know that there is no such thing as a brick.

Try again.

Look at Psalm 18. 5.

The sorrows of hell compassed me about.....

Then look at Psalm 116. 3.

.....the pains of HELL gat hold upon me: I found trouble and sorrow.

‘You don’t understand,’ says the first Muppet. ‘The word for HELL in both cases is shin-aleph-wau-lamedh, which means *the grave*.’ It pauses. ‘The ancient Israelites didn’t believe in an afterlife.’

Listen. If death brings about a state of unexistence, there can be no consciousness, so there can be no sorrow, there can be no trouble, and there can be no pain.

Be serious. When an intelligent author like David employs meaningful words, don’t translate them into impossible slush.

Now, then. What were we talking about? Oh, yes! Ecclesiastes – the book in which Solomon says UNDER THE SUN twenty-nine times.

We can be clear about one thing. Solomon isn’t talking about the physical life on earth that is lived out beneath the literal sun. If he is, HE’S TALKING RUBBISH.

‘All the exegetes whom I have read disagree with you,’ cries Seth Prodie.

Never mind Seth Prodie and his unison-choir of unblest parakeets. Let me prove what I’m saying. Read the last eight words of Ecclesiastes 1. 9 (AV) as if you were reading them analytically for the first time.

THERE IS NO NEW THING UNDER THE SUN.

Taken as they stand, those words are NONSENSE. Those who pretend otherwise have chosen to mutilate their intellectual faculties.

We must ignore every gibbering exponent of 'in-a-sense' double-think who presumes to turn plus one into zero. The lever watch was NEW when Thomas Mudge invented it in 1759. The saxophone was NEW when Adolphe Sax invented it in 1841. Walking on the moon was NEW when men did it for the first time in 1969. Only exegetes who have lost their reason will try to convert these pig-iron facts into phantoms of pork jelly. NEW THINGS are always coming into existence. (Think of eight-note conches.) I don't want to sound like Mr Toad.....

'That *would* be a new thing,' says Delia. 'Stop pulling my hair, you brute!'

.....but in 1983 I invented a new way of making the crumhorn, and in 1984 I invented a new kind of music stand whose six pieces could be assembled or separated in a few seconds. When Miss Benn removes her vengeful hands from my throat, I'll let her see the old journals in which these 'new things' were long ago described. Then I'll let you all see the three kinds of native timber that are drying out on my workshop racks. (Four-inch-thick trunks of gorse. Three-inch-thick lengths of ancient ivy. Multitudinous heather-stems.) I intend to make a small two-octave harp from each kind of timber. One day, if I live to fulfil my intent, there will be three altogether NEW THINGS under the literal sun: a gorsewood harp, an ivywood harp, and a heatherwood harp.

In the AV, verse 2 of Psalm 33 begins, *Praise the LORD with harp*. Verse 3 of the same psalm begins, *Sing unto him a new song*. Verse 5 of Psalm 98 begins, *Sing unto the LORD with the harp*. Verse 1 of the same psalm begins, *O sing unto the LORD a new song*. Furthermore, verses 22 and 23 of Lamentations 3 make it plain that NEW THINGS come to us with the morning sunlight.

It is of the LORD's mercies that we are not consumed, because his compassions fail not. They are NEW EVERY MORNING.....

Solomon is not talking nonsense. How does he want us to construe his words?

THERE IS NO NEW THING UNDER THE SUN.

UNDER THE SUN means *below the zero-line*. Solomon's weirdly recursive expression refers to the shadowy half-life that is lived in hell. It is a very unbalanced kind of life. In Ecclesiastes we find THE SUN thirty-five times, DAY seven times, and DAYS nineteen times, but we find NIGHT only twice, THE MOON only once, and GLORY never. A genuine alternation of day and night is unknown in hell, where crucibles of desire simmer, on the cinders of their own futility, beneath a dark anti-sun that appears always to be there. Hell is the place whose occupants, as a mathematician might say, *decay exponentially via two or more different but simultaneous processes*. Even on earth, it is really the dark anti-sun of hell that helps a bleary fantast like Jud Fry to dream in his lonely room.

Look at Ecclesiastes 1. 2.

הבל הבלים אמר קהלת הבל הבלים הכל הבל

(= VANITY of vanities, saith the Preacher, VANITY of vanities; all is VANITY.)

Solomon is not saying that all human life ON EARTH is meaningless, as some reckless modern translators have imagined. I mean to say, if human life really *was* meaningless, there would be no point in writing a book to say so.

(Here is an inextinguishable fact. Authentic humanity will never embrace the weak-armed wisdom of those who declare that everything is futile.

Many people don't believe in God at present. Some of these people are able to live lives which in several visible departments are useful, unselfish, and happy.

There is something noble about an existentialist philosopher who resolves to make the best of what he presently imagines to be an absurd world. In fact, his resolution displays to a certain degree the image of God in man.)

When I want to understand Ecclesiastes, I think of *La Traviata*. Annina goes out. Violetta draws a letter from her breast and reads it quietly in time to the music. Then she sings. Listen! Lettuce Girl is going to perform for us.

È tardi!
Attendo, attendo né a me giugon mai!
Oh, come son mutata!
Ma il dottore a sperar pure m'esorta!
Ah, con tal morbo ogni speranza è morta.
Addio, del passato bei sogni ridenti,
Le rose del volto già son pallenti;
L'amore d'Alfredo pur esso mi manca,
Conforto, sostegno dell'anima stanca.
Ah, della traviata sorridi al desio;
A lei, deh, perdona; tu accoglila, o Dio.
Or tutto finì.
Le gioie, i dolori tra poco avran fine;
La tomba ai mortali di tutto è confine!
Non lagrima o fiore avrà la mia fossa,
Non croce col nome che copra quest'ossa!
Ah, della traviata sorridi al desio;
A lei, deh, perdona; tu accoglila, o Dio.
Or tutto finì!

**It's too late!
I keep on waiting, but they never arrive!
Oh, how I've changed!
Yet the doctor still encourages me to hope!
Ah, such a disease means that all hope is dead.
Farewell, fair happy dreams of the past,
Already my rosy cheeks have turned pale.
I don't have even the love of Alfredo
To comfort and sustain my weary soul.
Ah, grant the desire of one who has gone astray:
For pity's sake, oh God, pardon and receive her.
It's all over.
The joys and the sorrows will soon have an end;
For mortals the tomb marks the final boundary!
My grave will have no tears, and no flowers,
And no cross with a name to stand above my bones!
Ah, grant the desire of one who has gone astray:
For pity's sake, oh God, pardon and receive her.
It's all over!**

Violetta's words help me to cope with the apparently inconsistent content of Ecclesiastes: trite pieces of truth, actual lies, memories of good times, despair, and even a bit of religion.

Now I'm going to hand an unused baton to one of my younger readers. That reader has never been able to tolerate commentators of the 'meaningless' school. The job of explicating Ecclesiastes in detail belongs to that reader. Let me set down a few facts by way of whetting his or her appetite for the job.

Solomon signs his book *at the beginning*. Remembering that Solomon's name in Hebrew is spelled shin-lamedh-mem-he, go to the first chapter of Ecclesiastes. Look at the last three letters of verse 1 (shin-lamedh-mem), and then look at the first letter of verse 2 (he).

דברי קהלת בן דוד מלך בירוֹשָׁלַם הבל הבלים אמר קהלת הבל הבלים הכל הבל

The author describes himself as KING, using a Hebrew word (mem-lamedh-kaph: underlined above), which in 400 gematria adds up to ninety.

He signs his name in the twenty-first, twenty-second, twenty-third, and twenty-fourth Hebrew letters of his book.

$$21 + 22 + 23 + 24 = 90 \quad [\text{an oblique reference to the Hebrew word for KING}]$$

Solomon also signs his name at the very end of Ecclesiastes.

*For God shall bring every work into judgment, with every secret thing,
WHETHER IT BE GOOD, OR WHETHER IT BE EVIL.*

The nine English words rendered *whether it be good, or whether it be evil* are represented in Hebrew by the four words aleph-mem teth-wau-beth wau-aleph-mem resh-ayin.

אם טוב ואם רע

In 400 gematria these four words add up to 375, which is the 400 gematric value of SOLOMON (shin-lamedh-mem-he).

Ecclesiastes 1. 2 means not that life is meaningless, but that the square root of minus one is the basis of creation. The word rendered *vanity* (he-beth-lamedh) is a mathematical term which will occupy our attention in chapter 26. It would irritate Solomon greatly to learn that many people take his word he-beth-lamedh to denote nothing more notable than the absence of meaning.

The phrase 'under the sun', as we have seen, means *below the zero-line*, and it represents two Hebrew words which in 400 gematria add up to 1453.

תחת השמש

$$\text{tau-cheth-tau he-shin-mem-shin} = [400 + 8 + 400] + [5 + 300 + 40 + 300] = 1453$$

The number 1453 is the sum of shin-aleph-wau-lamedh (= hell) and 1116 (= *Vanity of vanities, saith the Preacher, vanity of vanities; all is vanity*).

The word rendered 'Preacher' (qoph-he-lamedh-tau) has a 400 gematric value of 535, and really means, 'My place [is] in hell' (mem-qoph-wau-mem-yodh beth-shin-aleph-wau-lamedh). In 400 gematria mem-qoph-wau-mem-yodh adds up to 196, and beth-shin-aleph-wau-lamedh adds up to 339. The sum of 196 and 339 is 535. You may like to see how the numbers 535, 196 and 339 relate to each other.

$$\begin{array}{rcccl}
 \text{ק ה ל ת} & = & \text{ב ש א ו ל} & \text{מ ק ו מ י} & \\
 535 = 107 \times 5 & & 339 & 196 = 14 \times 14 & \\
 & & 1075 + 339 = 1414 & &
 \end{array}$$

Whenever I look at the numbers 535 and 1116, I start thinking about base 16.

Hexadecimal 535 is decimal 1333, decimal 535 is hexadecimal 217, and the difference between 1333 and 217 is 1116.

'I've seen something else,' says Delia. 'The two Hebrew words rendered *all is vanity* have 400 gematric values respectively of FIFTY-FIVE and THIRTY-SEVEN.' She pauses. 'Decimal 55 is hexadecimal 37.'

I forgot about that. Well done! Shall we stop for a tea-break?

David and Solomon used the word he-beth-lamedh to denote the square root of minus one. Nowadays we use the letter *i*. (Engineers use the letter *j* for a good reason of their own.)

$$\begin{array}{c}
 [i \times i] = -1 \\
 [i \times i \times i \times i] = [-1 \times -1] = 1
 \end{array}$$

David's name (daleth-wau-daleth) adds up to 14 in both 400 and 22 gematria. The number 14 may be interpreted to mean, 'Positive unity is a fourth power.'

Rosie is staring at a page of equations. We notice the numbers 0.77, 20, 3, 3.74, 480, 300, and 486. You don't understand the equations, and neither do I. Oh, well! For the present, let me repeat some of what I said at the end of chapter 6.

I reckon that from no later than the time of David, the ancient Israelites used the letter shin to denote zero. We'll see in a moment how David employed the articulate form of the Hebrew word for 'sun' to *represent* zero.

Without the article that word is spelled shin-mem-shin, and it constitutes a piece of arithmetic in itself.

Our English letter A on its own is a word. The Hebrew letter MEM on its own is also a word. Since mem means 'from', the word shin-mem-shin may be construed 'shin from shin', or 'shin subtracted from shin'.

In 400 Hebrew gematria shin = 300, so the word shin-mem-shin may be read as a little equation: *three hundred from three hundred equals zero.*

ש מ ש = 0

(The articulate form of the word *shemesh* is spelled he-shin-mem-shin.)

‘Is there a *locus classicus* for THE SUN as zero?’ asks Rosie.

Yes, and I’m going to go there now. Look at five consecutive words from the Hebrew text of Psalm 19 (last four words of verse 5, first word of verse 1).

לשמש שם-אהל בהם

[For the sun] [he has pitched]—[a tent] [in them]

והוא כחתן יצא מחפתו

[And he] [like a bridegroom] [comes out] [from his chamber]

The five words are made up of sixteen letters.

לשמש שם אהל בהם והוא

[lamedh shin mem shin] [sin mem] [aleph he lamedh] [beth he mem] [wau he aleph he]

David is writing about [the] *shemesh*, a long time after Moses, and yet Shamash is still a danger. That’s why the sun appears modestly in mid-verse along with a preficial lamedh -- not as subject, not even as direct object, but as something FOR which God has pitched a tent in the heavens. Between sin-mem (= he has pitched) and aleph-he-lamedh (= a tent) comes an important Davidic hyphen. The effect of this hyphen is to emphasise not the sun, but the tent.

ZERO IN CAMBODIA, THAILAND, AND MESOAMERICA



You see above the three Khmer numerals from the Sambor inscriptions of 683 AD which together denote the number 605. The central numeral is often said to represent the earliest known use of zero as a decimal figure.

‘Zero’ in Thai (ศูนย์ -- pronounced *sun*) is denoted by the symbol ๐.

 was one of a number of different glyphs which the Mayans used to represent zero. Some scholars have pointed to the appearance of a zero-glyph on a Mesoamerican stela which they date to 36 BC.

David deploys his five Hebrew words in such a manner as no Hebrew scholar might ever have predicted. Of course he has a good reason for doing so! Ignore any loser who tells you that David is 'merely being poetic'. The five Hebrew words contain a treasure-chest of ones and zeroes. If we're going to understand even the top layer of treasure, we must be prepared to think in terms of base 2, base 3, base 10, and base 16.

1010 101 10 1111 10000000 10000000000000

לשמש שם אהל בהם והוא

In 400 gematria the first two words lamedh-shin-mem-shin sin-mem add up to 1010, which is TEN in binary.

In 22 gematria the first two words lamedh-shin-mem-shin sin-mem add up to 101, which is TEN in ternary.

The sum of 1010 and 101 is 1111, which is the total value of all five words in 400 gematria.

In 22 gematria the third and fourth words aleph-he-lamedh beth-he-mem add up to 38. The fifth word (wau-he-wau-aleph) comprises respectively the sixth, fifth, sixth and first letters of the Hebrew alphabet, so it can be read as 6561 (THREE to the power EIGHT, or 10000000 in ternary).

Because $6561 = 81 \times 9^2$, the fifth word can also be read as 8192 (TWO to the power THIRTEEN, or 10000000000000 in binary).

Musical readers will want me to add that 8192 : 6561 is the ratio of the Pythagorean diminished fourth!

The five Hebrew words, which in 400 gematria add up to 1111, contain respectively four, two, three, three, and four letters. We dwell in an implicate universe. When we fold the number 42334 back upon itself like a penknife.....

$$423 + 34 = 457$$

.....we get 457, which is decimal 1111 in hexadecimal. (Hexadecimal 423 and 34 are respectively 1059 and 52 in decimal, and $1059 + 52 = 1111$.) No one should account for these facts in terms of fortuity, because David's five Hebrew words contain SIXTEEN letters.

‘I made a note about two different 864s a long time ago.’ Delia sets a piece of paper on the table. ‘It may not be relevant today.’

We saw in chapter 7 that the 400 gematric value of SUN AND MOON in Psalm 148. 3 (שמש וירח): shin-mem-shin wau-yodh-resch-cheth) was 864.

The 400 gematric value of SAUL AND JONATHAN in II Samuel 1. 23 (שאול ויהונתן): shin-aleph-wau-lamedh wau-yodh-he-wau-nun-tau-nun) is 864.

‘Listen,’ says Lettuce Girl. ‘I’ve been thinking about *music*.’ She pauses. ‘You said that 8192 : 6561 was the ratio of the Pythagorean diminished fourth.’

So I did.

‘Joshua got the sun and the earth to stand still in relation to each other.’

Yes.

‘That fact was recorded in the book of Jasher.’

Correct.

‘So was the notation of David’s lament for Saul and Jonathan.’

True.

‘Well, then.’ Lettuce Girl rises to her feet. ‘There has to be something supremely *musical* about the sun.’

‘I need to know something.’ Delia suppresses a yawn, and walks over to the window. ‘David uses the word he-shin-mem-shin to mean *zero*.’

He does.

‘That articulate word has a 400 gematric value of 645.’

So it has.

‘Does David ever encode *in a complete verse* the idea of 645 as nothing?’

Yes, he does! The fourth verse of Psalm 144 has a 400 gematric value of 645.

אדם להבל דמה ימיו כצל עובר

Man is like to vanity: his days are as a shadow that passeth away.

That overall numerical value tallies with the 400 gematric value of the Hebrew word which we render 'the sun'.



David spelled his word for ZERO as we spell ours: with four characters.

That's enough! We've gone as far as I want to go for now. The Davidic zero needs a book of its own. One of my readers can write that book. Presently I am excited by the contemplation of an earthy matter which involves little difficulty or danger. Last month I made a very crude bowl from riverbank clay. Today the Blessed Greta, a regular committer of clandestine acts, promised to have it fired for me in the art college. Next week, if all goes well, I'll paint the bowl with metal-oxide-and-water pastes. Once I've dipped it over and over again in different glazes, I'll entreat Greta to have it fired for a second time.

Oh, dear. Here's a felt-headed puppet wanting to say that the ancient Israelites didn't believe in an afterlife! And here's a second felt-headed puppet wanting to say that the ancient Israelites didn't have a zero! Before long a third felt-headed puppet will try to say that no one in antiquity ever thought of the leap year.

THE PHOENIX AND THE CALENDAR

Fuglen omflagrer os, hurtig som Lyset, deilig i Farve, herlig i Sang

(= The bird flies about, fast as light, lovely in colour, and glorious in song).

Hans Christian Andersen, 'The Phoenix Bird'

What happens when a zeroless four-digit number A-B-C-D is made to generate the number $[(A \times B-C-D) + (A-B \times C-D) + (A-B-C \times D)]$?

Well, it depends on the particular number. 5848 doubles itself.

$$[(5 \times 848) + (58 \times 48) + (584 \times 8)] = 11696 = [2 \times 5848]$$

5848, the product of eighty-six and sixty-eight, is the sum of four pointless numbers which you may find familiar: 1414, 1732, 1260, and 1442.

4122 generates its own reversal.

$$[(4 \times 122) + (41 \times 22) + (412 \times 2)] = 2214$$

1461 generates itself.

$$[(1 \times 461) + (14 \times 61) + (146 \times 1)] = 1461$$

In *Annals* 6. 28 Tacitus mentions a tradition that the phoenix appeared every *mille quadringentos sexaginta unum* (= 1461) years. You can see from the equation above how the phoenix emerges from its own mathematical 'ashes'. But the number 1461 can be generated in a much simpler manner.

$$[365 + 365 + 365 + 366] = 1461$$

A quadrennium containing one leap year is made up of 1461 days. In 400 gematria the six Hebrew words of Psalm 104. 2 add up to 1461. The final word כִּירִיעָה has a gematric value of 315, whose three digits can generate the number of seconds in a year: $[315 + 1]^3 + [(3 \times 15) \times (51 + 3)] = 31556926$.

עֲטָה-אוֹר כְּשֶׁלְמָה נוֹטָה שָׁמַיִם כִּירִיעָה

(= Who coverest thyself with light as with a garment: who stretchest out the heavens like a curtain).

CHAPTER 24: MY BROTHER'S KEEPER

ΦΙΛΩ ΗΣ ΑΡΙΘΜΟΣ Φ Μ Ε (= I love the girl whose name adds up to 545).

A Greek graffito in Pompeii

John Dyer's poem 'The Ruins of Rome' contains 545 lines.
St Finian established the Movilla monastery in 545 AD.
The 'Golden Jubilee' diamond weighs 545 carats.
Domenico Scarlatti composed 545 sonatas.

Here is a prelusive sentence for innocent students of literature. If writers like Edgar Allan Poe, Lewis Carroll, and Vladimir Nabokov tell you exactly how some of their literary themes came into being, don't imagine that you have to believe them!

We shall begin with a parallel sentence. If you haven't read 'The Hunting of the Snark', which is Lewis Carroll's greatest poem, GO AND READ IT NOW. Seth Prodie believes that the poem is calculated to make society come adrift.....

'Then it must be really brilliant,' says the new Biblical scholar whose name is Greta Hegans. 'I have to go and be Salammbô in a photo-shoot, but if you give me a copy of the poem I'll read it while I'm sitting about.'

Seventy minutes later an unrecognizable Greta returns in a state of exultant unease, bearing a reel of thick green thread, a coil of brass wire, a pair of pliers, a carpet bodkin, and about a hundred laurel leaves. 'That poem is terrifying,' she says. 'There's nothing infantile about it.' Miss Hegans pulls off a black wig and shakes her head exuberantly. 'The whole thing is concerned with *annihilation*.'

Yes! Notably in its gematria, as I'll explain. You've observed that Lewis Carroll alludes to the Hebrew language in one stanza.

*"I said it in Hebrew -- I said it in Dutch --
I said it in German and Greek:
But I wholly forgot (and it vexes me much)
That English is what you speak!"*

You've also noticed a pair of mathematical stanzas.

*"Taking Three as the subject to reason about --
A convenient number to state --
We add Seven, and Ten, and then multiply out
By One Thousand diminished by Eight.*

*"The result we proceed to divide, as you see,
By Nine Hundred and Ninety Two:
Then subtract Seventeen, and the answer must be
Exactly and perfectly true."*

A person is annihilated when THE SNARK (definite article) who confronts him turns out to be A BOOJUM (indefinite article). While the use of two different articles is a clear sign of authorial deliberateness, the mention of Hebrew, taken

together with the arithmetical verses, is a pointer to the presence of gematria. (Not for nothing is Hebrew the *first-named* of the four foreign languages.)

In gematric terms, a person is annihilated when THE SNARK who confronts him turns out to be THE SNARK MINUS ONE. Lewis Carroll is playing with an English numerical alphabet that we encountered a long time ago.

$$A = 1, B = 2, C = 3, D = 4, E = 5, F = 6, G = 7, H = 8, I = 9$$

$$J = 10, K = 20, L = 30, M = 40, N = 50, O = 60, P = 70, Q = 80, R = 90$$

$$S = 100, T = 200, U = 300, V = 400, W = 500, X = 600, Y = 700, Z = 800$$

In 800 gematria, THE SNARK adds up to 474, but A BOOJUM adds up to 473.

$$\text{THE SNARK} = [200 + 8 + 5] + [100 + 50 + 1 + 90 + 20] = \underline{474}$$

$$\text{A BOOJUM} = [1] + [2 + 60 + 60 + 10 + 300 + 40] = \underline{473}$$

A fictional character may swallow the identity of its author. (Think of Sherlock Holmes and Sir Arthur Conan Doyle.) In 'The Hunting of the Snark', Lewis Carroll is contemplating his own annihilation at the hands of two beings whom he himself has created.

$$\text{LEWIS CARROLL} = [30 + 5 + 500 + 9 + 100] + [3 + 1 + 90 + 90 + 60 + 30 + 30] = \underline{948}$$

$$[\text{THE SNARK} = 474] + [\text{A BOOJUM} = 473] = \underline{947}$$

'I understand.' Greta opens up a decosmetificatory reticule, selects a tiny sponge, and begins to remove black dross from the gold of her brows. 'It isn't a matter of watching society come adrift. Minus one means *personal death*.'

Correct.

'My two names add up to 474!' Greta exclaims. 'If ever I come across a person whose two names add up to 473, should I keep well away from him?'

No. Be serious. You've got nothing to fear from characters like Robert Back, the wonderful marine artist who died in 2004.

$$\text{GRETA HEGANS} = [7 + 90 + 5 + 200 + 1] + [8 + 5 + 7 + 1 + 50 + 100] = 474$$

$$\text{ROBERT BACK} = [90 + 60 + 2 + 5 + 90 + 200] + [2 + 1 + 3 + 20] = 473$$

Nonetheless, Lewis Carroll has given us all something interesting to think about. Greta expressed his gematric message in four words.

MINUS ONE IS DEATH.

Some readers may prefer to express the poet's message in nine words.

TO BE CONFRONTED BY MINUS ONE IS TO DIE.

Many ancient Israelites would have understood that arithmetical message in terms of the first human death, or in terms of the person who caused it.

‘What do you mean?’ asks Greta.

Before I answer your question, let me revise some material from chapter 23.

We’ve already seen how David employed the articulate form of the Hebrew word for ‘sun’ to represent zero.

[In Wolof *fan* is ‘day’ and *weer* is ‘moon’, so *fanweer* (one of two Wolof expressions meaning ‘thirty’) bespeaks the approximate number of days in a lunar month.

‘*Weer-wolof*,’ shrieks the third Elsie. ‘Werewolf.’

Don’t laugh. Someone is already organizing a conference about lycanthrophilology, whose four central letters may be read backward, as the third Elsie should know, to spell the Swahili word for ‘bat’ (*popo*).]

Exit lycanthropologist. Back to work! The inarticulate Hebrew word for ‘sun’ is spelled shin-mem-shin, and it constitutes a piece of arithmetic in itself.

Our English letter A on its own is a word. The Hebrew letter MEM on its own is also a word. Since mem means ‘from’, the word shin-mem-shin may be construed ‘shin from shin’, or ‘shin subtracted from shin’.

In 400 Hebrew gematria shin = 300, so the word shin-mem-shin may be read as a little equation: *three hundred from three hundred equals zero*.

$$\text{ש} \quad \text{מ} \quad \text{ש} \quad = \quad 0$$

(The articulate form of the word *shemesh* is spelled he-shin-mem-shin.)

It shouldn’t amaze us that the mathematicians of ancient Israel employed the articulate form of the Hebrew word for ‘watchman’ to denote minus one.

Without the article that word is spelled shin-mem-resh, and it constitutes a piece of arithmetic in itself.

Let me repeat myself. Our English letter A on its own is a word. The Hebrew letter MEM on its own is also a word. Since mem means ‘from’, the word shin-mem-resh may be construed ‘shin from resh’, or ‘shin subtracted from resh’.

In 22 Hebrew gematria shin = 21 and resh = 20, so the word shin-mem-resh may be read as a little equation: *twenty-one from twenty equals minus one*.

$$\text{ר} \quad \text{מ} \quad \text{ש} \quad = \quad -1$$

(The articulate form of the same word is spelled he-shin-mem-resh.)

$$\text{ר} \quad \text{מ} \quad \text{ש} \quad \text{ה}$$

What you see above is the four-letter articulate word that was used by the ancient Israelites to denote minus one. It means ‘the watchman’, and in 400 gematria it adds up to 545.

‘Hold on,’ says Rosie. ‘You remember the first eleven words of Genesis 2. 9.’ She pauses. ‘Those words contain numbers-of-letters respectively as follows.’ She writes quickly on a slip of paper. ‘Look.’

5 4 5 2 5 2 2 4 5 4 5

‘On either side you have a 545,’ Rosie continues. ‘In the middle you have five digits whose product is 160, and.....’

‘In 400 gematria, the name of Cain adds up to 160,’ says Delia.

‘That’s what I was going to tell you!’ cries Rosie. ‘But listen. Genesis 2. 9 is really about prime numbers. Why would you have a double reference to minus one in the context of prime numbers?’

I don’t know.

‘We’re talking about Wilson’s Theorem,’ Delia murmurs helpfully.

Not today! Leave the matter of prime numbers for the present. Rosie and Delia have linked the first eleven Hebrew words of Genesis 2. 9.....

545 2 x 5 x 2 x 2 x 4 545
MINUS ONE C A I N MINUS ONE

.....with the very noun for which Cain is most famous. Genesis 4. 9 reads in the AV as follows.

*And the LORD said unto Cain, Where is Abel thy brother?
 And he said, I know not: Am I my brother's keeper?*

Cain’s question is shown below in Hebrew and English. The preficial HE with which the first word begins is not a definite article, but an interrogative particle.

הַשֹּׁמֵר אֶחָיו אֲנִי

[Interrogative particle HE + the-watchman-of] [my brother] [am] I?

‘Is that the *locus classicus* for he-shin-mem-resh as minus one?’ asks Rosie.

Yes, it is. Look at the three Hebrew words which make up Cain’s question.

The first Hebrew word (= interrogative particle HE + the-watchman-of) is spelled he-shin-mem-resh, and it has a 400 gematric value of 545.

The second Hebrew word (= my brother) is spelled aleph-cheth-yodh, and it has a 400 gematric value of 19.

The third Hebrew word (= am I) is spelled aleph-nun-kaph-yodh, and it has a 400 gematric value of 81.....

‘Which means that all three Hebrew words add up to 645,’ says Delia. ‘And 645 is Hebrew for *nothing*. You can see what’s going on.’ She pauses. ‘Cain is Mr MINUS ONE. Once Cain *annuls* his ONE brother, NOTHING is left of Abel.’ Suddenly Miss Benn rises to her feet. ‘Attend, ye adepts. The name of Cain is spelled qoph-yodh-nun, and in 400 gematria it adds up to one hundred and sixty.’ She pauses theatrically. ‘The name of Abel is spelled he-beth-lamedh, and in 400 gematria it adds up to thirty-seven. Is what I’ve said correct so far?’

It is.

‘That’s good.’ Delia smiles. ‘One hundred and sixty is five *multiplied by* thirty-two, and thirty-seven is five *plus* thirty-two.’ She pauses. ‘I reckon that Cain and Abel stand for the first quadratic equation in history.’ Miss Benn sets a slip of paper on the table. ‘The two values of x are five and thirty-two.’

$$x^2 - 37x + 160 = 0$$

‘That is *amazing*,’ says Greta, who has already made a kind of bowl by stitching eight laurel-leaves around a wire frame. ‘Well done.’

‘Thanks, dear!’ Delia sits down. ‘Now, then. Let’s go further.’ She closes her eyes. ‘We’ve agreed that Cain is minus one. In chapter 23 we learned that David and Solomon used the word he-beth-lamedh to denote the square root of minus one.’ Miss Benn pauses. ‘Abel’s name is spelled he-beth-lamedh.’ She opens her eyes. ‘Here’s what I want to know. Is Abel the square root of minus one?’

Yes. Cain is minus one, and Abel is the square root of minus one.

The quadratic equation which Delia has discovered is of ENORMOUS importance. If we want to understand the quadraticity or ‘squareness’ of the numerical relationship that exists between Cain and Abel, we need the roots of Delia’s equation.

In 400 gematria Abel is [32 + 5] and Cain is [32 x 5], so there is a sense in which Abel multiplied by himself produces Cain.

‘We can say the same thing less directly if we use the square of thirty-seven,’ says Delia. ‘Watch.’ She writes three short equations on one line at the bottom of a page.

$$37 \times 37 = 1369, \text{ and } 13 + 69 = 80 + 2, \text{ and } 80 \times 2 = 160$$

Bene fecisti! Well done!

‘I know how my old acquaintance Joale would have translated *Bene fecisti*,’ says Lettuce Girl. ‘Benny is a fascist.’

Don’t laugh. We all know scholars like Joale. Not long ago the third Elsie asked me if *Unter den Linden* could be taken to mean ‘sublime’. Yes, I replied, and Émile Zola invented the jacuzzi, but ‘dormouse’ in Mayan is *glyph glyph*. Undeterred, the third Elsie thought fit to tell me that with the help of a student who came from Ashgabat, he had rendered the Turkmen poet Makhtumkuli’s pellucid line *İli – gökleň, ady – Meňli* as, ‘Her glockenspielish name is Meňli’.

Last month the third Elsie informed me that in 800 English gematria the values of CLAUDIA SCHIFFER and ARCHDEACON BLENNERHASSETT BLANE were both ‘centred octahedral numbers’. He went on to reveal that the Chanel emblem came from a Charles II silver twopence of 1679. Comment is needless.



Now let us get back to the real study of language. The word he-shin-mem-resh, which in 22 gematria means *the twenty-one from twenty*, takes on a value of 545 when we numerate it in terms of 400 gematria. We can see the word he-shin-mem-resh, or the gematric equivalent of that word, as telling us how to get minus one by subtraction. By contrast, we can see the number 1369, which in terms of 400 gematria is the square of he-beth-lamedh, as telling us how to get minus one by multiplication.

Verse 12 of Psalm 81 (AV, verse 11) has a total 400 gematric value of 1369. The whole verse may be seen as founded on the square root of 1369, because in 400 gematria its first word (wau-lamedh-aleph) adds up to 37.

ולא-שמע עמי לקולי וישראל לא-אבה לי

(= But my people would not hearken to my voice; and Israel would none of me).

Esther 7. 9 contains a 400 gematric riddle that you can work at in your own time. The 545 or minus one of death comes to 95 Haman (המן: he-mem-nun) at the moment when 271 Harbonah (חרבונה: cheth-resh-beth-wau-nun-he) allies himself with 274 Mordecai (מרדכי: mem-resh-daleth-kaph-yodh). 271 plus 274 makes 545, and 545 plus 95 makes 640 zero (שמש: shin-mem-shin).

Genesis 5. 24 tells us that Enoch ‘was not, for God took him.’ In 400 gematria the Hebrew words לקח אתו (= took him) add up to 545.

The Hebrew text of I Chronicles 3. 14 has a total 400 gematric value of 545. It contains only four words.

אמון בנו יאשיהו בנו (= Amon his son, Josiah his son).

The four Hebrew words have values respectively of 97 (= Amon), 58 (= his son), 332 (= Josiah), and 58 (= his son). Josiah can be seen as Amon minus one.

[Josiah = 332 interpreted as 3 x 32 = 96] = [Amon = 97] – 1

‘We’ve come back to the Snark!’ says Greta.

‘Amon was murdered,’ says Delia. ‘Like Abel.’

So he was. And that reminds me. *It’s Monday night.* Soon I’ll have to go and play soccer. Oh, horror! I shan’t take any dinner now. I’m too scared. But I’ve left a Finnish chocolate bar in the fridge, and if it isn’t there when I get back I’ll slit every wezand in the house with the Crescent Moon Blade of Guan Gong. Or make you all listen while I read aloud from *Pot’s Tearing Aggressive Lays.*

CHAPTER 25: A GOLDEN REED TO MEASURE THE CITY

I will not conceal his parts, nor his power, nor his comely proportion.

Job 41. 12

Thy golden numbers by the muse inspired.....

William Drummond, *The Satires of Persius*

Fie, fie, fie, fie!

William Shakespeare, *Timon of Athens*

Listen, you gang. I have endured a night of torment for which there is no parallel in the chronicles of Carthaginian infamy. In plainer English, I've been kicked and hammered completely useless. Tonight I hang up my ancient boots to the stern god of sea. Carry me into the morning-room, lay me down on the Tabriz rug in front of the fire, cover me with a Tibetan blanket of yak-wool, *y llámese si fuere posible, a la sabia Urganda, que cure y cate mis feridas* (= and if it be possible, let the enchantress Urganda be sent for, to cure my wounds).

'I can do what she can do better than anyone,' says Dulcinea, whose real name escapes me for the moment. 'What thou needest is a medium-sized fry.' She pauses. 'It will help thee to beat down the evil.'

Thy words are wise. Let it be done as thou hast said.

'It is already being done.' Miss Benn, for it is she, points to the stove. 'Lave thyself in gelid water. Thy dinner will be on the table in twelve minutes.'

NEVER TRUST PEOPLE WHO PLAY A MAD BALL-GAME

Many readers are aware of the three facts which follow. At the end of a game of Mayan hip-ball, members of the losing team were put to death. The Mayan religion required an enormous number of human sacrifices. Mayan astronomers are often said to have predicted that cosmic disaster will engulf the earth on 21 December 2012.

During my lifetime several nerdarchs have written wild apocalyptical books in which they demand that we take the putative prediction seriously.

How should we act if by God's grace no cosmic disaster engulfs the earth on 21 December 2012? I'll tell you. Round up the nerdarchs. Put them in pillories along with all the other charlatan prophets, like Magic Randolph. Then pelt them with rotten peaches. Oh, and recycle their stupid books.

Whenever you get washed after playing soccer or hockey, you realize how wonderful it is *not to be completely spiritual*. Here's what I'm trying to say. Physicality is great. If we were completely spiritual beings, we could never restore ourselves to happiness by splashing about in cold water. You may

disagree with Viktor Schauberger or Callum Coats about a lot of things, and still agree with them that water is far more than a thing or a commodity. Water is our fellow-creature. Listen to verses 4 and 7 of Psalm 148 (AV).

Praise him, ye heavens of heavens, and ye WATERS that be above the heavens.

Praise the LORD from the earth, ye dragons, and all DEEPS.....

If you want to find the molecular weight of water, you add up the weights of two hydrogen atoms (two), and the weight of one oxygen atom (sixteen), to get a total of eighteen. The proportion by weight of oxygen to water is 16 : 18.

And that proportion brings to mind the golden ratio, which is often denoted by the Greek letter ϕ (phi).

$$\phi = 1 : 1.618 = 0.618 : 1$$

When you add 1.618 to 0.618, you get 2.236, which is the four-digit value of the square root of five.

The golden number ϕ can be expressed as *one plus the square root of five, all over two*.

Its twenty-digit value of 1.6180339887498948482 is encoded in the two words of Genesis 2.9 (kaph-lamedh ayin-tzaddi = EVERY TREE) which are printed in large type below.

ויצמח יהוה אלהים מן האדמה

כל עץ נחמד למראה וטוב למאכל

And out of the ground made the LORD God to grow

EVERY TREE that is pleasant to the sight, and good for food.....

The two words contain an oblique instruction: transcribe the Hebrew word for TREE (ayin-tzaddi) into EVERY one of the four numerical alphabets.

In 400 gematria the word ayin-tzaddi adds up to $70 + 90 = 160$.

In 22 gematria the word ayin-tzaddi adds up to $16 + 18 = 34$.

In 406 gematria the word ayin-tzaddi adds up to $130 + 104 = 234$.

In 28 gematria the word ayin-tzaddi adds up to $40 + 32 = 72$.

It was inevitable that the two-letter word ayin-tzaddi, which uses first the SIXTEENTH and then the EIGHTEENTH letter of the Hebrew alphabet, would be employed to denote the golden number. Its four gematric forms, which add up to 500, participate in an important mnemonic equation.

$$[160 - 34] + [234 - 72] = 288 = [16 \times 18]$$

The ten digits of the four gematric terms (1 6 0 3 4 2 3 4 7 2) generate the twenty-digit golden number 1. 6180339887498948482 in a manner which readers will find familiar. Forget about decimal points for the present.

1 6 0 3 4 2 3 4 7 2

$$\begin{aligned}
 161 &= 160 - 3 + 4 \\
 80 &= 2 + 3 + 4 + 72 - 1 \\
 339 &= - 6 + 0 + 342 + 3 \\
 88 &= 4 + 72 + 1 + 6 + 0 + 3 + 4 - 2 \\
 749 &= 34 + 721 - 6 + 0 \\
 89 &= 3 + 4 + 2 + 3 + 4 + 72 + 1 \\
 484 &= 60 - 3 + 423 + 4 \\
 82 &= 72 + 1 + 6 + 0 + 3
 \end{aligned}$$

FOUR gematric values whose digits add up to THIRTY-TWO suggest the quadruple three-and-two arrangement of the golden number's digits.

Look at the numbers of digits which appear on the right side of each equal sign. Reading from top to bottom, we find

FIVE digits, SIX digits, SIX digits,
 NINE digits, SEVEN digits, EIGHT digits,
 SEVEN digits, SIX digits.

Encode those three lines of information respectively as 566, 978, and 76. Then look at the last fourteen digits of the golden number.

161 80 3[39 88] [749 89] [484 82]

Three mnemonic equations leap out of these fourteen digits.

$$\begin{aligned}
 [484 + 82] &= 566 \\
 [- 7 - 4 + 989] &= 978 \\
 [- 3 - 9 + 88] &= 76
 \end{aligned}$$

The ten groups of golden-number digits which appear on the left side of the equal signs (161, 80, 339, 88, 749, 89, 484, and 82) add up to 2072. On the right side of the equal signs we find a quintuple run of 160, 34, 234, and 72, plus 160

and what is really the *thirty* part of thirty-four. Think back to the language that we used in connection with Psalm 7. 1. If we add up the four gematric values of ayin-tzaddi (= tree) in a manner which respects their original integrity, we get a 'title total' of 2690.

$$[5 \times (160 + 34 + 234 + 72)] + [160 + 30] = 2690$$

When we subtract the 'groups total' from the 'title total', we get 618, which needs no comment.

$$2690 - 2072 = 618$$

Instead of computing 'two-linking' numbers as we did in the case of Psalm 7. 1, we can simply add up the three mnemonic numbers that tell us how many digits appear on the right of each equal sign.

$$566 + 978 + 76 = 1620$$

Now go back to the words kaph-lamedh ayin-tzaddi (= every tree) which appear in Genesis 2. 9. In 400 gematria the value of kaph-lamedh is 50, and the value of ayin-tzaddi is 160. The product of these two numbers gives us a very useful eight thousand.

$$[50 \times 160] = 8000 = [2072 + 2690 + 1620] + 1618$$

'That is tremendously compact,' says Rosie. 'But tell me something.' She pauses. 'Does any *entire Biblical verse* have a total 400 gematric value of 1618?'

Oh, yes. In Hosea 5. 12 God promises that he will relate to Ephraim and Judah almost in terms of a ratio.

ואני כעש לאפרים וכרקב לבית יהודה

Therefore will I be unto Ephraim as a moth,
and to the house of Judah as rottenness.

$$400 \text{ gematric values: } 67 + 390 + 361 + 328 + 442 + 30 = 1618$$

The meaning of the verse's gematric total is that God's punitive actions will in the end bring about a proper relationship between himself and his people.

Then you have Ezekiel 42. 19, which is actually concerned with measurement,

סבב אל רוח הים מדד חמש מאות קנים בקנה המדה

He turned about to the west side, and measured
five hundred reeds with the measuring reed.

$$400 \text{ gematric values: } 64 + 31 + 214 + 55 + 48 + 348 + 447 + 200 + 157 + 54 = 1618$$

Ezekiel's 'five hundred reeds' may refer obliquely to the four gematric values of ayin-tzaddi (160, 34, 234, and 72), which add up to 500.

In I Kings 1. 26 we find the thought of a due order that the usurper Adonijah has set aside. I'll print the 400 gematric word-values below the English translation.

וְלִי אֲנִי עַבְדְּךָ וְלִצְדָק הַכֹּהֵן וְלִבְנִיָּהוּ
בֶן יְהוֹיָדָע וְלִשְׁלֹמֹה עַבְדְּךָ לֹא קָרָא

But me, even me thy servant, and Zadok the priest, and Benaiah the son of Jehoiada, and thy servant Solomon, hath he not called.

$$46 + 61 + 96 + 230 + 80 + 109 + 52 + 105 + 411 + 96 + 31 + 301 = 1618$$

'Tell me something,' says Delia. 'Which of those three verses represents a deliberate authorial use of gematria?'

I don't know. Perhaps none. Or perhaps only Ezekiel 42. 19.

'That's what I thought myself,' says Delia. 'The three verses seem to bear no relation to each other. And yet I'm finding a *sonic* element in different gematric 1618s.' She pauses. 'Look.' She sets a sheet of paper on the table.

I Kings 1. 26 (total 400 gematric value = 1618)

But me, even me thy servant, and Zadok the priest, and Benaiah the son of Jehoiada, and thy servant Solomon, hath he not CALLED.

Matthew 20. 32

And Jesus stood still, and CALLED (εφωνησεν = 1618) them, and said, What will ye that I shall do unto you?

Romans 10. 14

How then shall they CALL on him in whom they have not believed? and how shall they believe in him of whom they have not heard? and how shall they hear without a PREACHER (κηρυσσοντος = 1618)?

'You said *sonic*,' says Rosie thoughtfully. 'Two of my friends believe that the golden number is important in music.' She pauses. 'What they say is largely concerned with Fibonacci numbers. Eight notes in the scale. Thirteen semitones in the octave.' Miss Stone points to a page of her notebook.

d e f g a b c' d'

d d# e f f# g g# a a# b c' c#' d'

'What have the Fibonacci numbers got to do with the golden ratio?' asks Greta.

Rather a lot. Once the Fibonacci series gets up and running, the ratio of any term to its immediate predecessor will give you a pretty good value for the golden number.

and music *with little effort*. Oh, dear. What do the baddies say in evangelical comics? HAW, HAW!

I have got through life marvellously well without ever using expressions like aetiology, *a priori*, epistemological, Fourth Gospel, *Gattung*, genre, Great Commission, hamartiology, *Heilsgeschichte*, hermeneutic, heuristic, immanent, kerugmatic, metanarrative, missiology, ontological, salvific, sectarianism, *Sitz im Leben*, synoptic, teleology, and transcendent.

Likewise, I have got through a pretty versatile musical life without ever talking about the golden ratio or the Fibonacci numbers.

Do silly people irritate you by talking about ‘the Fourth Gospel’, and by using the ugly word ‘salvific’? Then call Galatians ‘the Fourth Epistle’, and use the word ‘vivific’ in every other sentence. You’ll annoy them all in a most satisfying way.

Many weak-minded persons use the word *genre* obsessively. ‘Nothing is more important than the categorization of a text,’ they say. Nonsense. Avoid robotic classifiers who believe that the whole point of literary criticism is the pigeon-hole. (Such persons tend to know little about world literature.) Always allow a text to tell you what kind of text it is. Ban the fungus-word *genre* from your speech.

If you apply the golden ratio to the unitary string-lengths of the 864-432 scale, you will produce sounds that relate musically to none of the given string-lengths. People who fool about with numbers are like chimpanzees who play with chessmen. Example one. Last year the Alban Berg of Ballymena composed a waterdrip-torture pizzicato pavane in carefully counted sections of 34 bars, 55 bars, and 89 bars. His Fibonacci numbers made that pavane neither tuneful nor concordant. Example two. Last month the Aphra Behn of Belfast, whose favourite dictum is *I MUST READ MORE THEORY*, wrote a jargonistic poem in carefully counted sections of 34 lines, 55 lines, and 89 lines. Her Fibonacci numbers imparted neither rhythm nor euphony to that poem. Example three. Last week the Aubrey Beardsley of Bangor painted a cement-wash picture of Jane Dascey on a canvas 89” long and 55” wide. His Fibonacci numbers brought neither life nor light to that picture, from which Lettuce Girl fled aghast. No arcane formula can ever take the place of competence or industry. Of course good music, good literature and good art *are* produced by magic, but in most cases the magic is A LIFETIME OF CONTINUAL HARD WORK.

As we approach the end of chapter 25, let me cite what is the *locus classicus* for Fibonacci numbers in the Bible. Job 41. 12 (AV, 41. 20) runs as follows.

מנחיריו יצא עשן כדוד נפוח ואגמן

Out of his nostrils goeth smoke, as out of a seething pot or caldron.

400 gematric values: 324 + 101 + 420 + 34 + 144 + 100 = 1123

The total 400 gematric value of Job 41. 12 is 1123, which encodes the first four post-zero terms of the Fibonacci series. Look at the last two digits of the number 1123. Two plus three is five, and two to the power three is eight. The first and last digits of the number 1123 give you thirteen, while the third and second digits give you twenty-one. In addition, [11 + 23] = 34. That’s not all. 1123 may be interpreted as [11 x (2 + 3)] to give 55. Furthermore, the gematric values of Job 41. 12’s fourth word (34) and fifth word (144) are both Fibonacci numbers.

The six gematric values of Job 41. 12 generate formulae for six Fibonacci numbers, as follows. (SIXTEEN digits appear on the left of the equal signs, and EIGHTEEN numbers appear on the right of the equal signs.)

$$\begin{array}{ll} 34 = 34 & 233 = 324 + 144 - 101 - 34 - 100 \\ 89 = 324 - 101 - 34 - 100 & 377 = 101 + 420 - 144 \\ 144 = 144 & 610 = 324 + 420 - 34 - 100 \end{array}$$

Look at the draconine context in which these formulae are created.

Out of his nostrils goeth smoke, as out of a seething pot or caldron.

Fibonacci numbers look tame when you see them lined up in order on a page.

0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584

When they are breathed out by the leviathan, there's nothing tame about them.

That number 1123 reminds me of certain facts about the 400 Hebrew gematria of Genesis 1. 1. The thirteen letters from letter ELEVEN to letter TWENTY-THREE, counted inclusively, add up to 888, which is the 800 Greek gematric value of the name Ιησους (= Jesus). Ten letters precede the thirteen-letter group, and five letters follow it, reminding us first of the octave ratio 2:1, and secondly of the fact that there is 'one mediator between God and men' (I Timothy 2. 5). Look back if you like to page 428.

בראשית ברא אלהים את השמים ואת הארץ

I'm going to enunciate a couple of facts before we stop. First, numbers are real things. Secondly, the universe is a far wilder place than many self-immured anchorites are willing to imagine. Remember what the old hymn says. *Great may be our dullness.* Are you a very boring person? Then listen. Your own dullness permits you to believe neither that Almighty God is boring, nor that he has created a boring universe. Be prepared for WILDNESS. The time may come when you will say, like Li Qi,

龍吟虎嘯一時發

(= A singing dragon and a roaring tiger arise in the same moment).

Some people happily sit behind their desks all day, thinking solemn thoughts. They never learn how exhilaratingly unsafe and uncomfortable the real world can be. They never get wet. They never get cold. They never get dirty. They never get hurt. They regard adventurers with disapproval and dislike. They expect great sea-monsters to obey the laws of a goldfish bowl. What are they? Losers.

'Here we go again,' cries Lexis Picot. *'All sober scholarship is useless. Only a dithyrambic corybant is able to understand the universe.* Try to be serious! Not everyone is obliged to live in a world of galloping horses, open boats, rough games, mud-wrestling, and water-fights.' He pauses. 'Forget about Chinese dragons and tigers. I want to focus on the most absurd doctrine that you've ever propounded. Does any sane person see numbers as *real things*?'

Yes! Pushkin does. In 'The Queen of Spades', speaking of Hermann, he says,

.....тройка цвела перед ним в образе пышного грандифлора, семёрка представлялась готическими воротами.....

.....the Three bloomed in front of him like a luxuriant flower, the Seven took the form of a gothic doorway.....

Eichendorff goes even further in *Taugenichts*.

Denn die Acht kam mir immer vor wie meine dicke enggeschnürte Dame mit dem breiten Kopfputz, die böse Sieben war gar wie ein ewig rückwärtszeigender Wegweiser oder Galgen. -- Am meisten Spaß machte mir noch die Neun, die sich mir so oft, eh ich michs versah, lustig als Sechs auf den Kopf stellte, während die Zwei wie ein Fragezeichen so pfiffig drein sah, als wollte sie mich fragen: Wo soll das am Ende noch hinaus mit dir, du arme Null? Ohne sie, diese schlanke Eins und alles, bleibst du doch ewig nichts!

You see, the Eight always came before me as one whom I knew: the plump, tightly corseted lady with the broad coiffure. The evil Seven was rather like a signpost pointing eternally backward, or like a gallows. – The Nine gave me the most entertainment, merrily turning itself into a Six by standing on its head before I realized what it was up to, while the Two, like a question-mark, looked so crafty, as if she wanted to ask me: What’s going to happen to you in the end, you poor Zero? Without *her*, this slender One-and-All, you’ll remain nothing for ever!

‘You’re asking me to waste my time on *nineteenth-century German fiction*,’ says Picot. ‘Will you not be serious for a moment? I need something better than mere -- *literature*.’ He pauses. ‘Do you think a novelist can help me to understand the Bible? If you do, you should be able to give me an example.’

Let me give you an example from the foregoing passage of *Taugenichts*. Notice how one number inverts itself to become another number.

The Nine gave me the most entertainment, merrily turning itself into a Six by standing on its head before I realized what it was up to.....

Once you’ve read those words, you’ll find it easy to understand the numerical mirror-imaging that lies below the surface of II Corinthians 3. 18 (AV).

But we all, with open face beholding as in a glass the glory of the Lord, are changed into the same image from GLORY to GLORY.....

The AV’s phrase ‘in a glass’ means ‘in a mirror’. What does the phrase ‘from glory to glory’ mean? Well, as we saw on pages 94 and 95, it involves numerical *mirror-imaging*. You recall that the Hebrew word for GLORY is spelled kaph-beth-wau-daleth. In 22 gematria the word kaph-beth-wau-daleth adds up to TWENTY-THREE (11 + 2 + 6 + 4). In 400 gematria the word kaph-beth-wau-daleth adds up to THIRTY-TWO (20 + 2 + 6 + 4).

THIRTY-TWO IS THE REVERSAL, OR MIRROR IMAGE, OF TWENTY-THREE.

There is no such thing as ‘mere literature’. The corpus of world literature that Lexis Picot has always refused to explore is both a garden of delights for civilized people and a wonderful resource for genuine scholars. (GET THIS. THERE IS NO SUCH THING AS A GENUINE SCHOLAR WHO IS NOT A CIVILIZED PERSON.) Good literature is never ‘mere’. Intelligent readers often find that one author can help them to understand another author. You remember the dictum of Terence which we met on page 305:

homo sum: humani nil a me alienum puto

(= I am human, so I reckon that nothing human is foreign to me).

But hark. *Geschwinde! Geschwinde!* Goethe bids us hurry to the close. Let me conclude chapter 25 with an Aeolian blast. The Bible contains the greatest literature in the world. Do you want to be a Biblical commentator? THEN YOU NEED TO BE A LITERARY PERSON.

Think of colours. If you know nothing about art, you won't be able to rebuke Solimin Cazarrin for an overuse of alizarin crimson in the flesh tones of his notorious *Minoan Corinne*.

Think of counterpoint. If you know nothing about music, you won't be able to praise Uta Montaigne for the passage of augmentation which makes her *Canon in E minor* so memorable.

When St Paul preached the gospel in Athens, he led some of his listeners to faith in the Lord Jesus Christ by quoting from Greek literature. Lexis Picot shouldn't need to be told that Paul relied on his listeners to know their own literature.

It's funny. While Dr Picot has read neither Pushkin nor Eichendorff, he regards one particular Teutonic scholar as a divine manifestation. Here is a startling fact. Picot has spent much of his academic life in reading *nineteenth-century German fiction*. He would be horribly shocked if anyone told him so. Last week in a public lecture he ridiculed the idea that Solomon was the author of Ecclesiastes. 'The style of the Hebrew is not comparable with that of Solomon's time,' Picot asserted. 'If Solomon was the author, his book must have been translated into the literary style of a later age.' Oh, dear. How many substantial monuments of Hebrew literature can Picot adduce, *from different periods*, in support of his assertion? It is dangerous to make dogmatic pronouncements about the literary style of a particular author. Edmund Spenser deliberately employed many words and spellings that were archaic in his own day. Furthermore, Cicero the writer of speeches and Cicero the writer of letters had two completely different styles. Any man who talks about literary style needs to be a literary man. But alas! Sometimes Dr Picot affects the linguicidal style of Prof. Judith Butler. When he was talking about Ecclesiastes 2. 4-10, Picot quoted with approval the following sentence from Prof. Butler's article 'Further Reflections on Conversations of Our Time' [see *Diacritics* 27 (Spring 1997), 13-15].

The move from a structuralist account in which capital is understood to structure social relations in relatively homologous ways to a view of hegemony in which power relations are subject to repetition, convergence, and rearticulation brought the question of temporality into the thinking of structure, and marked a shift from a form of Althusserian theory that takes structural totalities as theoretical objects to one in which the insights into the contingent possibility of structure inaugurate a renewed conception of hegemony as bound up with the contingent sites and strategies of the rearticulation of power.

That sentence brought three pieces of genuine language into my mind. First was a Tagalog aphorism of the Filipino polymath José Rizal. *Ang hindi magmahál sa kanyang sariling wika ay mahigít pa sa hayop at malansang isdâ* (= A person who doesn't love his own language is lower than an animal or a rotten fish). Second was a line of the Tatar poet Ğabdulla Tuqay. И туган тел, и матур тел, әткәм-әнкәмнең теле! (= O native tongue, o lovely tongue, the tongue of my father and mother!). Third, and overwhelming in its gravity, was the eighty-ninth verse of Psalm 119 (AV). *For ever, O LORD, thy word is settled in heaven.*

When I came home from the lecture I found my front door drenched in moonlight. Something moved me to encrypt the Hebrew words יָרֵחַ (= moon), אֹר (= light), and הדלת (= the door) in a vespertilian passage of English prose. For no exquisite reason I shall place that passage beneath the epigraph of chapter 26.

CHAPTER 26: THE ROOT OF THE MATTER

*Oraidano egon bahiz
inprimitu bagerik,
hi engoitik ebiliren
mundu guzietarik.*

Unread and in bygone days
Missing print, you lag, nor speak.
See! In joy, your Jubal-lyre
Men do muse on every peak.

Four lines of Basque verse by Bernat Etxepare, and an oneiric translation

(A month ago the two paintings which find employment on one's front cover appeared in an exhibition. They were comprehensively ridiculed by two of one's neighbours. Last night one dreamed that the same neighbours viewed the same pictures in another exhibition, believing them to have been painted by two of their Smart Friends From School. It was amazing. One's two neighbours fawned on their backs like spaniels in front of the two paintings, and bought *Wisdom* for twice the price that one had asked in reality. Of course it was only a dream.)

Several magazines were delivered to our home when I was growing up. One of them was a weekly boy's comic called *The Eagle*. Another one was a monthly journal called *Practical Wireless*, which was taken by my father. Nowadays I read old copies of *The Eagle* with deep emotion, but at around the age of twelve I left comics behind, and moved on to *The Boy's Book of Crystal Sets*, by W J May. (We're talking about the no-nonsense world of 1964, in which men were men, and girls played with dolls.) Crystal receivers struck me as miraculous. For a year I occupied most of my leisure time with aerials (= antennae), earths, hand-wound coils, 500 pF variable capacitors, and germanium diodes. Soon I was reading my father's *Practical Wireless* with as much zest as formerly I had read *The Eagle*.

Practical Wireless, which is still running, was a remarkable magazine. For twenty-seven years it was edited by Frederick James Camm (below, left), a brilliant, wide-ranging, and indefatigable man who provided the model for Keith Stewart in Nevil Shute's novel *Trustee from the Toolroom*. The final letters of the two names FREDERICK and JAMES became the initials of Nevil Shute's hero. Now back to *Practical Wireless*. Although F J Camm died in 1959, his editorial policy of 'something for everyone' lived on. So you would always find in *PW*, as it was known, articles for complete beginners as well as articles for experts. One day in April 1964 I lifted *PW* from the floor of our moorish-tiled vestibule, and turned to an article about the square root of minus one. I read that article with considerable excitement.



More than four decades later, I'm still excited by the square root of minus one, and I still see crystal receivers as miraculous. If you want to tread the path

which I trod, you should join the Crystal Set Society, and you should read Tony Thompson's book *Vintage Radios* (Crowood Press: Marlborough, 2007). It may be that working with aerial and earth will help you to understand 'unseen things above'. Certainly it was important for me that I first encountered the square root of minus one in the company of wonderful real things that worked.

Anyway! Now that we know where Keith Stewart comes from, we can look for a second time at Ecclesiastes 1. 2.

הבל הבלים אמר קהלת הבל הבלים הכל הבל

Vanity of vanities, saith the Preacher, vanity of vanities; all is vanity.

The modern English word VANITY is a bad rendering of he-beth-lamedh (= emptiness, or vapour). Furthermore, qoph-he-lamedh-tau doesn't mean PREACHER. Let us see if we can translate the verse into sensible English.

*Emptiness of emptinesses, says the Assembler,
emptiness of emptinesses: everything is emptiness.*

That translation is horribly ugly. Never mind what the commentators say about superlatives. It helps us *not at all* to be told that 'emptiness of emptinesses' really means 'Supreme Emptiness'. In a universe where everything is emptiness, can there be a high degree of emptiness?

The Supreme Emptiness, if that is what it is, floats in a verbless waste. It does nothing. Nothing is done to it. (Only an idle reader like Seth Prodie will say, 'That emphasizes the emptiness.')

Well! Let's perform a simple act of substitution. Does it help us to understand the structure of Solomon's sentence if we change the word *emptiness* to JELLY?

Jelly of jellies, says the Assembler, jelly of jellies; everything is jelly.

Or, *Supreme Jelly, says the Assembler, Supreme Jelly; everything is jelly.*

Yes, it certainly does. But what is 'SUPREME Jelly'? If you really believe that everything is jelly, you should say so in a sentence of three words.

Everything is jelly.

If you refer ONCE to some undefined thing called 'Supreme Jelly', which does nothing, and which gets nothing done to it, you'll mess up your sentence and confuse your readers.

Supreme Jelly, says the Assembler; everything is jelly.

Furthermore, if you refer TWICE to some undefined thing called 'Supreme Jelly', which does nothing, and which gets nothing done to it, you'll make your readers believe either that there are *two* Supreme Jellies, or that Supreme Jelly has a split personality.

Supreme Jelly, says the Assembler, Supreme Jelly; everything is jelly.

'We must not spend so much time on one verse,' says Seth Prodie. 'Why do you waste the time of your readers? Everyone knows what the verse *means*.'

Not so. Very few people know what the verse means. When I read the renderings of certain modern translators, I feel like a man who tries to eat a bowl of clear soup with an absinthe spoon. As it stands, Solomon's Hebrew sentence is no more a sensible piece of language than the Indian chief Soh-cah-toa is a real historical figure. (We've seen how Soh-cah-toa reminds a student of three facts: *sine* = opposite over hypotenuse, *cosine* = adjacent over hypotenuse, and *tangent* = opposite over adjacent.) Take a break for a moment while I make tea.

NEVER TOLERATE THE FATUOUS USE OF NUMBERS

From the very start the new decade will confront us all with its own special challenges.

Wrong. Whatever 'challenges' are, they don't come in neat decennial packages. (If you want to see how stupid the foregoing piece of booby-talk really is, paraphrase it as follows. *We shall all face some difficulties in the future.*)

It is particularly appropriate that we are studying the poems of John Millington Synge in the hundredth year of his death.

Wrong. In a civilized world the study of literature is ALWAYS right and desirable. Authorial centenaries provide us with no reason to study literature, so they are WORSE THAN TRIVIAL. (Let me add that the phrase *particularly appropriate* is a hideous piece of language. You should never use it. Furthermore, if you say 'appropriate' and 'inappropriate' when you mean respectively *right* and *wrong*, your strength is small. Avoid inflated words! In chapter 31 we'll meet a loser who says *As I have already indicated* when he means *As I have already said*.)

The new initiative was announced only seventy-two hours after the mayor made his hard-hitting speech.

Wrong. The mayor finished making his speech at eleven o'clock on Monday morning, and the new initiative was announced at noon on Thursday. Why must a foolish journalist ignore the truth? Why can he not say *seventy-THREE hours*? And why must he record the number of hours that happen to separate two events? If he feels compelled to mention units of time, he should say *three days*.

When a foolish journalist is talking about an aircraft disaster, twenty years after the event, he shows no respect for anyone by citing a meaningless flight number.

Ecclesiastes 1. 2 is not meant to be apprehended at first reading. It is meant to be PROBED. Solomon is at pains to say not that human life is meaningless, but that the square root of minus one is the basis of creation.

Look at the eight Hebrew words which make up Ecclesiastes 1. 2.

הבל הבלים אמר קהלת הבל הבלים הכל הבל

Here are the 400 gematric values of these eight words. (They add up to 1116.)

37 87 241 535 37 87 55 37

The eight gematric values, when considered in association with the pieces of language which generate them, arrange themselves naturally in four groups.

[37 + 87] [241 + 535] [37 + 87] [55 + 37]

It turns out that the four groups have total values as follows.

124 776 124 92

Now the word rendered 'Assembler' generates a MIRROR-IMAGE number (535), and hereby hangs a secret tale. When we add the numerical value of each group to its own reversal.....

$$[124 + 421] \quad [776 + 677] \quad [124 + 421] \quad [92 + 29]$$

.....we stand on the threshold of a Tartarean Koyaanisqatsi.

$$545 \quad 1453 \quad 545 \quad 121$$

We've seen the numbers 545 and 1453 before.

545, the 400 gematric value of he-shin-mem-resh, meant MINUS ONE to the mathematicians of ancient Israel.

1453 is the 400 gematric value of tau-cheth-tau he-shin-mem-shin (= under the sun). It also represents the combined 400 gematric values of two entities: the word shin-aleph-wau-lamedh (= hell: 337), and Ecclesiastes 1. 2 (= 1116). When Solomon says *under the sun*, he means ' in the world below zero'.

For its part the number 121 is the 400 gematric value of אלילים (aleph-lamedh-yodh-lamedh-yodh-mem = worthless things, or idols, or false gods).

121 combines with the 545 which precedes it to give an unholy 666, while 1453 combines with the 545 which precedes it to give 1998. In 400 gematria the first five Hebrew words of Genesis 1. 1 add up to 1998.

בראשית ברא אלהים את השמים

(= In the beginning God created the heavens).

The subtext here is that before God gave physical form to his design for the earth, primordial evil was already active in the spiritual realm, and that primordial evil would one day be defeated ON EARTH.

Why does Solomon give us two 545s? And why does Moses give us two 545s in Genesis 2. 9 (see page 462)?

$$5-4-5 \quad 2-5-2-2-4 \quad 5-4-5$$

Because *positive unity is the square of minus one*. An early stage of God's creation is represented by an equation that everyone knows.

$$[- 1 \times - 1] = 1$$

An even earlier stage is represented by the equation which follows.

$$[i \times i] = - 1$$

David and Solomon used the word he-beth-lamedh, which has a 400 gematric value of 37, to denote the square root of minus one.

Is it possible to express the number *i* in terms of any real number? No, it is not.

But consider the question which follows. What is *i* to the power *i*?

One answer to that question is the real number whose post-zero mantissa can be written in four digits as .2079, or in twenty digits as .20787957635076190855.

Forgetting about decimal points, I'm going to set out the more accurate of these two values in large print.

20787957635076190855

Now look at the gematric values of Ecclesiastes 1. 2.

37 87 241 535 37 87 55 37

The eighteen digits of the eight gematric values encrypt *i* to the power *i*.

We start with the gematric values of the two words which are rendered 'says the Assembler', and read backward.

$$5 + 3 + 5 + 1 + 4 + 2 = 20$$

The next three digits speak for themselves.

$$787 = 787$$

How do we know to start counting on the last digit of 535? And how do we know to count backward? Well, look at the gematria of Ecclesiastes 1. 1-2. Verse 1 consists of 216 (= דברי) plus 1279 (= קהלת בן דוד מלך בירושלם). Verse 2 consists of 900 (= קהלת) plus 216 (= קהלת). Verse 1's 216 is immediately followed by the word קהלת (= the Preacher), and verse 2's 216 is immediately preceded by the word קהלת. The effect of the two 216s is to throw the word קהלת into relief. Furthermore, the first word of verse 2 (קהלת) has a gematric value of 37. That gematric value, in which three comes before seven, may be construed as an instruction to read the THREE digits 535 before reading the SEVEN digits 1427873.

Delia is wondering if we have to do with an oblique play on firsts and lasts. 'The *last* letter of Solomon's name is the *first* letter of Ecclesiastes 1. 2,' she says, 'and it has a gematric value of FIVE.' She points to a page of her notebook.

דברי קהלת בן דוד מלך בירושלם קהלת אמר קהלת הכל הבל

'קהלת is Solomon,' Miss Benn continues. 'The *last* digit of קהלת's gematric value is FIVE, and that FIVE is the *first* digit of Solomon's encrypted formula-set.'

Good work! By the way, verses 1 and 2 add up to 373 x 7. Now let us move on. The eighteen gematric digits of Ecclesiastes 1. 2 are used two and eight-ninths times. I'm going to set out a triple run of the eighteen digits on the perimeter of a hexagonal clock-face. Inside that perimeter I'll write a set of equations. Three appearances of the word he-beth-lamedh tell us to use the eighteen digits three times. The verse's eight Hebrew words tell us to divide the twenty digits 20787957635076190855 into eight groups. Finally, the number of Hebrew words (eight) may be expressed as two to the power three, so we'll arrange the twenty digits in alternating groups of two and three.

‘Let me ask a question about the cryptogram,’ says Delia. ‘We have a triple run of eighteen digits. Why are the last two digits of the third run not used?’

They *are* used. Let me show you how. You remember the triangles which you and Rosie created when we were working at Psalm 7. We had links on the left, title on the right, and groups on the ground. For our present purpose we’ve divided the twenty digits 20787957635076190855 into eight groups: 20, 787, 95, 763, 50, 761, 90, and 855. Our groups total is therefore 3421.

$$20 + 787 + 95 + 763 + 50 + 761 + 90 + 855 = 3421$$

The eighteen gematric digits of Ecclesiastes 1. 2 are used two and eight-ninths times. Our ‘title total’ will therefore be three times the total gematric value of Ecclesiastes 1. 2, minus thirty-seven.

$$1116 + 1116 + 1116 - 37 = 3311$$

That total is easy to remember, because 3311 is the pyramidal number of twenty-one (that is, of 3 x 7). The difference between 3421 and 3311 is [37 + 73].

$$1 + 4 + 9 + 16 + 25 + 36 + 49 + 64 + 81 + 100 + 121 + 144 \\ + 169 + 196 + 225 + 256 + 289 + 324 + 361 + 400 + 441 = 3311$$

Do we have a set of ‘two-linking’ numbers? Oh, yes.

Digit number TEN of Ecclesiastes 1. 2’s gematric digits 378724153537875537 goes with digit number ONE of *i* to the power *i*’s mantissa 20787957635076190855.

Digit number FOUR of Ecclesiastes 1. 2’s gematric digits 378724153537875537 goes with digit number THREE of *i* to the power *i*’s mantissa 20787957635076190855.

Digit number ONE of Ecclesiastes 1. 2’s gematric digits 378724153537875537 goes with digit number SIX of *i* to the power *i*’s mantissa 20787957635076190855.

Digit number FOURTEEN of Ecclesiastes 1. 2’s gematric digits 378724153537875537 goes with digit number EIGHT of *i* to the power *i*’s mantissa 20787957635076190855.

Digit number FIVE of Ecclesiastes 1. 2’s gematric digits 378724153537875537 goes with digit number ELEVEN of *i* to the power *i*’s mantissa 20787957635076190855.

Digit number SEVENTEEN of Ecclesiastes 1. 2’s gematric digits 378724153537875537 goes with digit number THIRTEEN of *i* to the power *i*’s mantissa 20787957635076190855.

Digit number EIGHT of Ecclesiastes 1. 2’s gematric digits 378724153537875537 goes with digit number SIXTEEN of *i* to the power *i*’s mantissa 20787957635076190855.

Digit number TWO of Ecclesiastes 1. 2’s gematric digits 378724153537875537 goes with digit number EIGHTEEN of *i* to the power *i*’s mantissa 20787957635076190855.

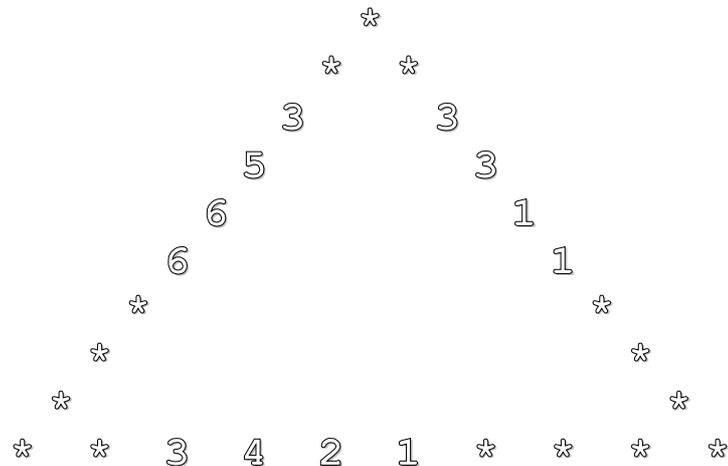
Let’s turn the eight pairs of digit-numbers into an octet of two-linking numbers.

- 1. 101 denotes that TEN goes with ONE.**
- 2. 43 denotes that FOUR goes with THREE.**
- 3. 16 denotes that ONE goes with SIX.**
- 4. 148 denotes that FOURTEEN goes with EIGHT.**
- 5. 511 denotes that FIVE goes with ELEVEN.**
- 6. 1713 denotes that SEVENTEEN goes with THIRTEEN.**
- 7. 816 denotes that EIGHT goes with SIXTEEN.**
- 8. 218 denotes that TWO goes with EIGHTEEN.**

The eight two-linking numbers add up to 3566.

$$101 + 43 + 16 + 148 + 511 + 1713 + 816 + 218 = 3566$$

Rosie has created a triangle which shows links on the left (3566), textual 'title' on the right (3311), and groups (3421) on the ground.



Delia has come up with a pair of mnemonic equations.

$$3566 - 3311 = 255, \text{ and } 3421 - 3311 = [2 \times 55].$$

Another equation hints at how musical sound may act upon apparent unbeing.

Last weekend I was playing double bass with a little-known local ensemble. For one piece I was asked to tune my instrument's bottom string down a whole tone from E to D. I was later accused of having caused the window-panes to rattle.

$[3566 + 3311 - 3421] = 3456$ = unitary string-length of the note D, two octaves below 864 *d*

Go back now to Delia's question. We have a triple run of eighteen digits.

3 7 8 7 2 4 1 5 3 5 3 7 8 7 5 5 3 7 3 7 8 7 2 4 1 5 3 5 3 7 8 7 5 5 3 7 3 7 8 7 2 4 1 5 3 5 3 7 8 7 5 5 3 7

Why are the last two digits of the third run not used?

See what you think. Here is the TITLE total.

$$3311 = [1116 + 1116 + 1116] - 37$$

Here is the GROUPS total.

$$3421 = [1116 + 1116 + 1116] + 73$$

And here is the LINKS total. Bear in mind that $3566 = 2 \times 1783$.

$$3566 - 21783 \text{ with the digits of } 73 \text{ removed} = [1116 + 1116 + 1116].$$

Where else do we find the digits 2, 1, 7, 8, and 3?

In 23871, which is the triangular number of 218.

The second and fourth digits of 23871, three and seven, may be understood in the context of Ecclesiastes 1. 2 as denoting he-beth-lamedh (= the square root of minus one). For their part the first, fifth and third digits of 23871 may be understood as denoting a mysterious word, wau-he-aleph-wau-resch (= and the light), which protrudes noticeably from the Hebrew text of Ecclesiastes 12. 2.

One elderly reader, a meticulous analyzer of sermons, wants to ask me why she has never heard expounders of Ecclesiastes 12 mention an articulate light that is neither solar, nor lunar, nor stellar. *Und nun sage ich kein Wort mehr.* (And now I shall not say another word. Nietzsche has some very useful sentences.)

והאור = and the light

The word wau-he-aleph-wau-resch, printed in large type below, appears in Ecclesiastes 12. 2 between *the sun* (he-shin-mem-shin) and *the moon* (wau-he-yodh-resch-cheth). Upon its 400 gematric value of 218, the number 23871 is built.

עד אשר לא תחשך השמש והאור והירח והכוכבים

(= As long as *the sun, AND THE LIGHT, and the moon, and the stars,* are not darkened).

While the sun, the moon, and the stars in Ecclesiastes 12. 2 stand for **CREATED** light, the word wau-he-aleph-wau-resch denotes **CREATIVE** light, which we meet in Genesis 1. 3-4. (*And God said, Let there be light: and there was light. And God saw the light, that it was good: and God divided the light from the darkness.*) During day one of creation, light gets to work on the square of he-beth-lamedh.

WISDOM IS BEFORE HIM THAT HATH UNDERSTANDING

The last two digits of the third run, as Delia calls them, prompt me to say a little about an arcane matter that I had resolved not to mention. Diligent readers can investigate the matter for themselves. The 400 gematric value of חכמה (= wisdom) is 73, and certain Biblical riddles make numerical sense only when the digits of 73 are introduced by the 'wise' reader. Here is one example. Proverbs 9. 1 happens to encode the number 16661, which we shall consider in chapter 32.

חכמות בנתה ביתה חצבה עמודיה שבעה

(= Wisdom [plural form] hath builded her house, she hath hewn out her seven pillars).

Note that while the 22 gematric value of the last word שבעה is 44, the verse's six words have 400 gematric values respectively of 474, 457, 417, 105, 135, and 377. Then observe how the digits 7 and 3 help to create two very concise formulae.

$$16661 = 4^7 + 4^4 + [7 \times 3] \quad 16661 = [377 \times 44] + 73, \text{ or } [377 \times (37 + 7)] + 73$$

It may be that the riddle of Revelation 13. 18 will be understood at the appointed time only when wisdom (חכמה or σοφία) is added to the score by a 'wise' reader.

Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of a man; and his number is Six hundred threescore and six.

Go back now to the groups total 3421, and remember that in Ecclesiastes 1. 2 Solomon is talking about the square root of minus one.

Here's a simple fact. The four-digit value of *i* to the power *i*, with the decimal point omitted, is 2079, and that four-digit value may be obtained by a simple manipulation of the groups total 3421.

$$3421 - 1342 = 2079$$

Here are two more simple facts. First, between Ecclesiastes 1. 2 and Ecclesiastes 5. 19 (AV, 5. 20), there come ninety-nine or 20 + 79 verses. Secondly, Ecclesiastes 5. 19 has a total 400 gematric value.....

.....of 2079. The verse happens to contain forty-one Hebrew characters.

כי לא הרבה יזכר את ימי חייו כי האלהים מענה בשמחת לבו

(= For he shall not much remember the days of his life; because God answereth him in the joy of his heart).

Add up the 400 gematric values of the verse's twelve Hebrew words for yourself.

$$30 + 31 + 212 + 237 + 401 + 60 + 34 + 30 + 91 + 165 + 750 + 38 = 2079$$

Of course there's more (a fundamental rule of Bible study!). Ecclesiastes 5. 19 can generate the *twenty*-digit number 20787957635076190855, as follows.

$$\begin{aligned} 207 &= 237 - 30 \\ 87 &= 30 + 91 - 34 \\ 957 &= 750 + 237 - 30 \\ 63 &= 237 + 38 - 212 \\ 507 &= 750 - 31 - 212 \\ 61 &= 30 + 31 \\ 908 &= 31 + 750 + 165 - 38 \\ 55 &= 30 + 237 - 212 \end{aligned}$$

I'll leave you to work out the two-linking total, the 'title total', and the groups total for yourself. For the present, let me state two facts in a single sentence, and then ask what may seem like a bizarre question.

The four-digit value of i to the power i , with the decimal point omitted, is 2079, and the 400 gematric value of shin-mem-resh (= minus one) is 545.

What happens when we square the number 545?

'We get a six-digit representation of positive unity,' says Delia intelligently.

So we do. Look at the phrase הרמש הרמש (= creeping thing that creepeth) in Genesis 1. 26, and work out the 400 gematria of its two Hebrew words.

$$\text{הֶרְמַשׁ} = [5 + 200 + 40 + 300], \text{ and } \text{הֶרְמַשׁ} = [5 + 200 + 40 + 300]$$

Then multiply the gematric value of one word by the gematric value of the other.

$$545 \times 545 = 297025$$

The number 297025 embraces the four-digit value of i to the power i .

Now the outer digits of 29702 may be set together to express its digital sum ($2 + 9 + 7 + 0 + 2 + 5 = 25$).

29702_5

But here is something of much greater moment. When the four contained digits 9702 are read backward, they give the four-digit mantissa of i to the power i .

$$9702 \text{ becomes } 2079$$

Furthermore, when the four-digit number 2079 is divided first by the digital product of 545 and then by the digital product of 545, the number 0.2079 appears.

$$2079 \text{ divided by } [(5 \times 4 \times 5) \times (5 \times 4 \times 5)] = 0.2079$$

There is far more to positive unity than many people are content to imagine. If you want an illustration of what I mean, consider the celebrated piece of almond-wood which appears in Numbers 17. 6-10.

And Moses spake unto the children of Israel, and every one of their princes gave him a rod apiece, for each prince one, according to their fathers' houses, even twelve rods: and the rod of Aaron was among their rods. And Moses laid up the rods before the LORD in the tabernacle of witness. And it came to pass, that on the morrow Moses went into the tabernacle of witness; and, behold, the rod of Aaron for the house of Levi was budded, and brought forth buds, and bloomed blossoms, and yielded almonds. And Moses brought out all the rods from before the LORD unto all the children of Israel: and they looked, and took every man his rod. And the LORD said unto Moses, Bring Aaron's rod again before the testimony, to be kept for a token against the rebels; and thou shalt quite take away their murmurings from me, that they die not.

That piece of almond-wood had a lot of dead snakes inside it

'If I promise to think really hard about those snakes, dear,' says Delia, 'will you let me say something now, before I forget it?' She looks down at her notebook. 'We've allowed the square of 545 to denote positive unity. But positive unity may be understood as the fourth power of *i*. The Hebrew for *i* is he-beth-lamedh, whose 400 gematric value is thirty-seven.' Miss Benn pauses. 'The fourth power of thirty-seven is 1874161, and 1874161 can be folded back upon itself, in penknife fashion, to give 1874 + 161, or 2035.'

'What's the big deal about 2035?' asks Rosie.

'2035 is the product of fifty-five and thirty-seven,' Miss Benn replies happily.

At once you see what Delia has in mind. The AV's expression *all is vanity* renders the two Hebrew words he-kaph-lamedh he-beth-lamedh. In 400 gematria he-kaph-lamedh adds up to fifty-five, and he-beth-lamedh adds up to thirty-seven.

CAVEAT VECTOR

Mathematicians call *i* 'the imaginary unit'. You may remember from page 292 that there are actually TWO square roots of minus one: *i* and minus *i*.

'I've found another verse that adds up to 2079,' Delia continues. 'Turn to Proverbs 8. 19.' She pauses. 'I haven't worked out the two-linking total or the groups total yet. Some of your readers can do that, dear.'

Miss Benn produces a large whiteboard from under the table, and begins to write on it. 'Watch,' she says.

טוב פריי מחרוץ ומפז ותבואתי מכסף נבחר

My fruit is better than gold, yea, than fine gold; and my revenue than choice silver.

400 gematric values: 17 300 344 133 825 200 260

The twenty digits of i to the power i : 20787957635076190855

$$\begin{aligned}207 &= 173 + 0 + 0 + 34 \\87 &= 41 + 33 + 8 + 2 + 5 - 2 + 0 + 0 \\957 &= 260 + 1 + 730 + 0 - 34 \\63 &= 41 + 33 - 8 + 2 - 5 \\507 &= 200 + 260 + 17 + 30 + 0 \\61 &= 34 + 41 - 3 - 3 - 8 \\908 &= 2 + 520 + 0 + 260 + 173 + 0 + 0 - 3 - 44 \\55 &= 1 - 33 + 82 + 5\end{aligned}$$

The verse's twenty digits are used THREE AND FOURTEEN-TWENTIETHS times.

$3^{14}/_{20}$ of the digits! Do we have here a link with π ?

(The answer to Delia's written question may be yes.

The numbers i and π are bound together in a sublime formula which the modern world knows as Euler's Identity.

But leave that little matter until we come to chapter 30.)

On the following day Miss Benn asks us mischievously to divide the square root of 432 by 100.

Then she informs us mischievously that 2079 is the 800 Greek gematric value of the word $\omega\rho\chi\eta\sigma\alpha\tau\omicron$ (= danced) in Matthew 14. 6.

At length Delia displays on her whiteboard an arcane piece of lore relating to twelve factorial.

$$\begin{aligned}12 \times 11 \times 10 \times 9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 &= 479001600 \\479 + 0 + 0 + 1600 &= 2079\end{aligned}$$

Now that is interesting! Delia's latest equation reminds me of a Chinese rice-flail whose two staves are connected by a double-zero chain. But it turns out that she has more to say.

'I was looking at Psalm 7,' says Miss Benn. 'You remember how we found the square and cube roots of two and three encoded in verse 1's ten Hebrew words.'

Yes.

'Well, I reckon that i to the power i is encoded in the same verse,' says Delia. 'Look.' She sets a small piece of card on the table. 'At the top you can see the 400 gematric values of the ten Hebrew words.'

| | | | | | | | | | |
|-----|----|-----|---|----|-----|-----|-----|----|-----|
| 369 | 44 | 501 | 500 | 56 | 100 | 216 | 326 | 52 | 120 |
| 20 | | = | 5 + 0 + 15 + 0 + 0 | | | | | | |
| 787 | | = | - 5 + 610 + 0 + 216 - 3 - 26 - 5 | | | | | | |
| 95 | | = | 2 + 120 - 36 + 9 | | | | | | |
| 763 | | = | 445 + 0 + 150 + 0 + 56 + 100 + 21 - 6 - 3 | | | | | | |
| 50 | | = | 26 + 5 + 21 - 2 - 0 | | | | | | |
| 761 | | = | 3 + 694 + 4 + 50 + 15 - 0 - 0 - 5 | | | | | | |
| 90 | | = | 6 + 100 - 21 + 6 - 3 + 2 | | | | | | |
| 855 | | = | - 65 - 2 + 1 - 20 + 3 - 6 + 944 | | | | | | |

‘I have one problem with your findings, dear,’ says Rosie at length. ‘You recall that our formulae for the square and cube roots of two and three employed an obviously Davidic total of 464 digits.’ She pauses. ‘How many digits are involved in your formulaic equations for *i* to the power *i*?’

‘Eighty-one,’ replies Miss Benn. ‘When you add four hundred and sixty-four to eighty-one, you get five hundred and forty-five, which means *minus one*.’ She smiles. ‘You can write a connective equation for the different totals, dear.’

Delia’s five hundred and forty-five, or [44 + 501], brings us to the end of a chapter that some readers have found intolerably terse and allusive. I shall enrage those readers by the brevity of my conclusion. Here goes.

The unsuccessful rebellion of Satan left a lot of unpleasant spiritual energy lying around. In connection with that spiritual energy, it may be helpful to adduce what Gogol makes Kostanzhoglo say to Chichikov in *Dead Souls*:

Рыбью шелуху сбрасывали на мой берег в продолжение шести лет сряду промышленники, – ну куда ее девать? Я начал из нее варить клей, да сорок тысяч и взял. Ведь у меня всё так.

For six years in a row the manufacturers have been dumping their fish-offal on my bank of the river. Well, what am I supposed to do with it? I started boiling up the stuff, and turned it into glue! Forty thousand rubels I made out of it. I’m telling you, that’s the way everything goes for me.

Hebrews 11. 3 confronts us with a fact of enormous importance.

THINGS WHICH ARE SEEN WERE NOT MADE OF THINGS WHICH DO APPEAR.

Ephesians 4. 8 tells us that Christ *led captivity captive, and gave gifts unto men*. Our Redeemer PLUNDERED the evil spiritual powers, and gave his plunder to the humans whom he had redeemed. (It may help you here to remember that in Genesis 14. 20 Abram enriched Melchizedek by 10% of the wealth of two wicked cities. It may also help you to read Ezekiel 39. 8-10 on your own.) I Corinthians 1. 28 tells us that God has chosen *things which are not, to bring to nought things that are*. Don’t equate *things which are not* with ‘nothing’. Look at the first two Hebrew words of Genesis 1. 1 (= In the beginning [he] created). In 400 gematria they add up to 1116, the total gematric value of Ecclesiastes 1. 2.

בראשית ברא = הבל הבלים אמר קהלת הבל הבלים הכל הבל

Writing in Pashto, the great Afghan poet Rahman Baba said of Almighty God,

له نیستی یې د هستی صورت پیدا کړو

(= From nothing he created all life).

But what the LORD used as the raw material of his physical creation was something far more profound than nothing. That invisible ‘something’ is represented in Solomon’s Hebrew by the word הבל (he-beth-lamedh).

My last two sentences will anger certain authors who aggressively propound the dogma of ‘creation *ex nihilo*’. I often wonder why these authors feel obliged to speak in two languages. A mixture of English and Latin does little to help the doctrine of ‘creation from nothing’, which is nowhere articulated in Scripture. Listen! Delia and I have written verse in Latin. When people who know NOTHING about the Latin language make pretentious use of two Latin words, we are bemused. (We are even more bemused when some illiterate conspiracist tries to translate *ANNUIT COEPTIS*, and makes a complete booby of himself.) The ex-nihilists need to stop telling everyone, with zero authority, that the Hebrew verb ברא always means ‘create from nothing’. If you add up the word ברא in terms of all four gematric alphabets, you get a total value of 1374, which may be construed thus. ‘Positive unity is הבל to the power four’.

People who count things need to be careful. A pack contains fifty-two cards. In discussing Pushkin’s story ‘The Queen of Spades’ (see *The Esoteric Tradition in Russian Romantic Literature: Decembrism and Freemasonry* [Pennsylvania State University Press, 1994], 160), Lauren G Leighton says, ‘The word for countess (*grafinia*) appears fifty-two times; other words used repeatedly for the old countess.....appear thirty-seven times.....’. Now the Hebrew word הבל has a 400 gematric value of thirty-seven. William P Brown (see *Ecclesiastes* [Louisville, Kentucky, 2000], 17) is one of many scholars who tell us that the word הבל is used thirty-seven times in Ecclesiastes. But Solomon actually employs the word הבל thirty-eight times in his joyless book. Why? I don’t know.

Ignore any commentator who tells you that Solomon was a forerunner of the Hungarian poet Petöfi Sándor.

*Mulandóság a királyok királya.
Ez a világ az ő nagy palotája.*

Transience is king of kings.
This world is his great palace.

Ecclesiastes is not principally concerned with life in ‘this world’. When death comes, the spirit returns to God who gave it. In the case of an unregenerate person, what happens to everything else? Go back to page 557, look at the hexagonal clock-face, and read I Chronicles 26. 14. Then read the prayer that Asaph makes about his enemies in Psalm 83. 14 (AV, verse 13).

אלהי שיתמו כגלגל

(= O my God, make them like a wheel).

Asaph reminds us that the square root of minus one may be represented in geometrical terms by an anticlockwise rotation through ninety degrees. If you like you can read what I wrote on page 98 about the ‘tap-and-turn’ technique. But I have said enough for the present. In fact, I may already have revealed too much.

CHAPTER 27: A BRANCH SHALL GROW OUT OF HIS ROOTS

“.....how.....can so much misunderstanding have arisen? Is it conceivable that a thousand profound scholars, investigating so very simple a matter for centuries, have not been able to place it in the fullest light, at least, of which it is susceptible?”.....

.....there is little difficulty or danger in suggesting that the “thousand profound scholars” may have failed first, because they were scholars; secondly, because they were profound; and thirdly, because they were a thousand -- the impotency of the scholarship and profundity having been thus multiplied a thousandfold.

Edgar Allan Poe, ‘The Rationale of Verse’

(Before we start, let me unseal two jars of metal oxides! After lunch I’m going to paint a heavy clay bowl which Greta got the art college to fire for me last week.)

Every so often a cryptographer will hide some important message in an extended piece of writing. Pretend that I want to meet Delia beside the Giant’s Causeway on the second day of July at 6.00 pm. I use the four-digit number 2718 to encode the date and time. Then I arrange for Miss Benn to receive an innocent-looking passage of prose which I have either composed, or selected, or cut to size.

My grandmother had warned me that the sin-rent city of Las Vegas would convert us all into different persons. I understood now what she meant as I watched my four friends smiling, adding sweetener to their coffee, and preparing to gamble for big money. Capricious Meg had turned herself into a serious-minded young woman simply by getting rid of her blonde wig. For his part Timothy had completely forgiven Meg for having lied to him about her family in the Andes. Raquel, the hilarious cabaret-dancer of Saturday night, had transformed herself into a Baudelairean *femme fatale*, and it was plain that Ian at least was not displeased by the transformation.

The atmosphere around our table was so heavily charged that I found it difficult to concentrate on the game. My four companions had suddenly become persons of tremendous gravity. They were no mere gamblers. They were ambassadors from the sombre realms of Art Nouveau. When they spoke, their words were freighted with inarticulate power. When they chose not to speak, their very silence was characterized by a palpable pulsation. Time itself seemed to have stopped. I felt uneasy. In fact, I felt *afraid*. A holstered security guard had stopped to watch our table.

I sensed that powerful forces would soon assert themselves.

And they did.

Twice in the course of that evening an atmospheric current expressed itself in an apparently trivial action.

When Meg drank from Timothy’s glass, I was certain that something wonderful, something far more profound than mere romance, had come into being.

And when Raquel used Ian’s dice, I was sure that a clandestine love existed, at some glorious level, between the exotic dancer and the taciturn librarian.

Delia knows what to do. Whenever she gets a message from me, she has to add up the first letters of consecutive sentences in 800 English gematria.

$$M + I + C + F + R + T + M + T + T + W + W + T + I + I + A + I + A + T + W + A = 2718$$

By way of confirming the date and the time, Miss Benn sends me a theatrical review from a New York newspaper. She has never allowed me to see this piece of writing before. The reviewer is called Ann Jupiter.....



.....and her three paragraphs happen to contain twenty-three significant letters.

Having to attend a production by Amelia Tweeddale is enough to make one vomit for a week afterwards. Miss Tweeddale is hardly a natural entertainer: as a few sad readers will know, she acted as chief editor for *The World Anthology of Minoritarian Yelping* (I forget the proper title). ‘Young and independent,’ her regular blurb alleges. If only she was! Apart from never having been young, Amelia Tweeddale has failed to shake off the influence of her mentor, the malevolent Ethel Baldock. Amelia’s theatrical début, a soppy Celebrate-Your-Deformity reworking of *Richard III*, was followed by several computer-game travesties. Two years ago, as we all remember, Miss Tweeddale gave us the Lara Croft *Hamlet*. Then we had the Salammbô *Othello* which Amelia took on tour to New Zealand or Koyaanisqatsi or whatever she calls it. And now, just when you thought it was safe to come out, the Trendy Wendy of American drama has returned to afflict us with the dull vulgarities of Eurotrash opera.

Miss Tweeddale’s Global Warming *Tempest* is awful on all but one count. Trinculo and Stephano, the moodiest members of the cast, are permanently wide-eyed, shaven-headed quasi-males who hold hands constantly. (*Of course* each of them uses his free hand to keep a cell phone in perpetual contact with one ear.) A young Dalai Lama, who gets about on a skateboard, plays Ferdinand. And perceive: an *amazing* Janet Reno lookalike plays Ariel in woodgrain trousers (clever!). Prospero is a tense Nicola Tesla who rules his Alaskan colony as if it was a mental hospital. Miraculous Miranda is a very tall aristo-Brit version of the goddess Venus, dressed in Chanel swimwear (*horrendously* non-Tweeddale!), while the statutory Postcolonial Caliban is a dignified dark-suited Jesse Jackson. Gonzalo is played by some joyless dweeb who looks exactly like Al Gore. Oh, and a non-speaking Mother Teresa, who gets about in a wheelchair, plays the resurrected Sycorax.

You should attend this production only if you are a connoisseur of pain. How can I sum up the Tweeddale *Tempest* in a few words? Appalling. Predictable. Ugly (apart from the chaste Miranda, who according to several of my informants is going to be the model for a Certain Sculptor’s remake of *The Greek Slave* -- remember you heard it here first!).

Along with the review, Delia has enclosed an eleven-line cento which last appeared in chapter 14. Today that cento bears a bizarre kind of title.

'TAKE AWAY THE.....' (Ezekiel)

*She hath not seen the change of fourteen years
That breathes upon a bank of violets.
To our pavilion shall I lead you first?
Herod of Jewry dare not look upon you,
Nor read the secrets in't. All this we swear
As maids of thirteen do of puppy-dogs:
I'll prove a busy actor in their play
In spite of pope, or dignities of church.
O brave new world! I sent you money, sir,
And now loud-howling wolves arouse the jades:
We must to horse again. Go, go, provide.*

Look at the first and last letters of all eleven lines. In 800 English gematria the eleven first letters add up to 1138.....

$$S + T + T + H + N + A + I + I + O + A + W = 1138$$

.....while the eleven last letters add up to 1793.

$$S + S + T + U + R + S + Y + H + R + S + E = 1793$$

1138 and 1793 add up to 2931. When you obey the titular command by 'taking away' from 2931 the 800 English gematric value of THE (= 213), you are left with a confirmatory 2718.

$$1138 + 1793 = 2931$$

$$2931 - 213 = 2718$$

Now Delia's titular phrase TAKE AWAY THE may indeed be found in the book of Ezekiel (AV: chapter 36, verse 26), but the real point of 'Ezekiel' is that in 400 Hebrew gematria Ezekiel 27. 18 adds up to 2931. If you think that Miss Benn is making me work too hard, you should go back to the theatrical review, and add up the first letters of its twenty-three sentences in 800 English gematria.

$$H + M + Y + I + A + A + T + T + A + M + T + O + A + A + P + M + G + O + Y + H + A + P + U = 2718$$

Diligent readers will get 27 and 18 by factorizing the number of letters which appear in the epigraph of chapter 27. They will also be able to find a gematric signature in the centre of the epigraph. (Some readers, perceiving a vespertilian structure in the epigraph, will look back to pages 323, 324, 337, 338, 368, and 473! Let oxides unseal that structure.)

HOWCANSOMUCHMISUNDERSTANDINGHAVEARISENINISITCONCE
IVABLETHATATHOUSANDPROFOUNDSCHOLARSINVESTIGATING
GSOVERYSIMPLEAMATTERFORCENTURIESHAVENOTBEENABLE
TOPLACEITINTHEFULLESTLIGHTATLEASTOFWHICHITISSUS
CEPTIBLETHEREISLITTLEDIFFICULTYORDANGERINSUGGES

TINGTHATTHEHOUS

ANDPROFOUNDSCHOLARSMAYHAVEFAILEDFIRSTBECAUSETHE
YWERESCHOLARSSECONDLYBECAUSETHEYWEREPROFOUNDAND
THIRDLYBECAUSETHEYWEREATHOUSANDTHEIMPOTENCYOFTH
ESCHOLARSHIPANDPROFUNDITYHAVINGBEENTHUSMULTIPLI
EDATHOUSANDFOLDEDGARALLANPOETHERATIONALEOFVERSE

Why am I making you perform four enigmatic pieces of mouthpiece-practice? Because I need you to get into cryptanalytical mode. If you think that you're ready for action, look at the small black book which is sitting open on my desk.

PSALM 87 *A Psalm or Song for the sons of Korah.*

His foundation is in the holy mountains.

The LORD loveth the gates of Zion more than all the dwellings of Jacob.

Glorious things are spoken of thee, O city of God. Selah.

I will make mention of Rahab and Babylon to them that know me: behold Philistia, and Tyre, with Ethiopia; this man was born there.

And of Zion it shall be said, This and that man was born in her: and the highest himself shall establish her.

The LORD shall count, when he writeth up the people, that this man was born there. Selah.

As well the singers as the players on instruments shall be there: all my springs are in thee.

The small book belongs to a ten-volume boxed set of the AV Bible. I bought the set on a rainy morning in 2007, when I was shopping with Duane and Martha Christensen in the large town of Coleraine. That town lies about fifty-five miles north-west of Belfast, and its name appears in the song 'Kitty of Coleraine'.

*As beautiful Kitty one morning was tripping
With a pitcher of milk from the fair of Coleraine,
When she saw him she stumbled, the pitcher it tumbled,
And all the sweet buttermilk watered the plain.
"Oh! What shall I do now, 'twas looking at you now,
Sure, sure, such a pitcher I'll ne'er meet again.
'Twas the pride of my dairy! Oh, Barney McCleary,
You're sent as a plague on the girls of Coleraine."*

A hint of the melody appears in the scherzo of Brahms' second piano concerto! But let me be sternly exegetical, because strange things are going on in the text.

Between line 2 and line 4 the *milk* turns to *buttermilk*.

Furthermore, the fourth word of line 3 is quite remarkable.

When she saw HIM she stumbled, the pitcher it tumbled.....

When she saw WHOM? We don't find out until line 7.

'Twas the pride of my dairy! Oh, Barney McCleary.....

It is a very rare thing for a deuteragonist to be introduced AS A PRONOUN.

Having remarked upon the rarity, let us decorously jump the considerable distance which separates 'Kitty of Coleraine' from Psalm 87.

Here is verse 1 of the psalm.

His foundation is in the holy mountains.

Does anything strike you?

‘The expression HIS FOUNDATION is most unusual,’ says Delia. ‘I mean, the Psalmist could easily have said *God’s foundation*, but he or she chose to say *HIS foundation*.’

Yes! *His foundation* is a remarkable phrase to find at the very start of a psalm.

Now let us all look at the two pieces of language which follow.

.....respondit mihi e monte sanctitatis suae.....

.....li condurrò sul mio monte santo e.....

The first piece comes from a Latin translation of Psalm 3. 4. It means, ‘.....he replied to me from the mountain of his holiness.....’.

The second piece comes from an Italian translation of Isaiah 56. 7. It means, ‘.....I will bring them to my holy mountain, and.....’.

What does the first epigraph have in common with the second epigraph?

‘A holy mountain,’ says Rosie.

‘More than that,’ says Delia. ‘A word consisting of the letter e.’

Yes! And hereby hangs a wonderful tale.

In Latin *e* means ‘from’, while in Italian it means ‘and’.

But in the language of mathematics, *e* is the base of the natural logarithm, and it has a four-digit working value of 2.718.

Psalm 87, radiant with geniality, is about the number *e*. What’s more, whoever edited the Psalter was aware of the fact! Look at the number eighty-seven.

8 7

The SECOND digit is SEVEN, and the FIRST digit is EIGHT.

Or, digit number TWO is SEVEN, and digit number ONE is EIGHT.

See if you can manage to say the four numbers which come in that last sentence without sounding.....

Тройка, семерка, туз!

Three, seven, ace!

.....like Hermann from ‘The Queen of Spades’.

TWO.....SEVEN.....ONE.....EIGHT!

2 7 1 8

2.718281828459045235360287471, the 28-digit form of the number *e*, is encrypted in Psalm 87. Each verse of the psalm encodes a group of four digits.

2718 2818 2845 9045 2353 6028 7471

Here is Psalm 87, set out in Hebrew and English. (If you like, you can add up for yourself *the total 400 gematric value and the total 22 gematric value of each verse. Use a magnifying glass to read the Hebrew, and take your time.*)

לבני-קרח מזמור שיר יסודתו בהררי-קדש

A Psalm or Song for the sons of Korah. His foundation is in the holy mountains.

אהב יהוה שערי ציון מכל משכנות יעקב

The LORD loveth the gates of Zion more than all the dwellings of Jacob.

נכבדות מדבר בך עיר האלהים סלה

Glorious things are spoken of thee, O city of God. Selah.

אזכיר רהב ובבל לידעי הנה פלשת וצר עם-כוש זה ילד-שם

*I will make mention of Rahab and Babylon to them that know me:
behold Philistia, and Tyre, with Ethiopia; this man was born there.*

ולציון יאמר איש ואיש ילד-בה והוא יכוננה עליון

*And of Zion it shall be said, This and that man was born
in her: and the highest himself shall establish her.*

יהוה יספר בכתוב עמים זה ילד-שם סלה

*The LORD shall count, when he writeth up the
people, that this man was born there. Selah.*

ושרים כחללים כל-מעניי בך

*As well the singers as the players on instruments
shall be there: all my springs are in thee.*

Verse 1 gives us the first group of four digits, 2718.

לבני-קרח מזמור שיר יסודתו בהררי-קדש

A Psalm or Song for the sons of Korah. His foundation is in the holy mountains.

The total value of verse 1 is 2510 in 400 gematria, and 359 in 22 gematria.

Two different interpretations of the difference between the 400 and 22 gematric totals may be multiplied to give 2718.

$$2510 - 359 = 2151, \text{ and } [2 + 1 + 5 + 1] \times [2 \times 151] = 2718$$

Furthermore, 359 may be expressed as 'the fraction 2 under 718'.

But the clearest statement of 2718 is contained in the conspicuous word yodh-samekh-wau-daleth-tau-wau (= *his foundation*), first word of the sung text, which I've printed in large type. The 400 gematric value of yodh-samekh-wau-daleth-tau-wau is $486 = 27 \times 18$.

Verse 2 gives us the second group of four digits, 2818.

אהב יהוה שערי ציון מכל משכנות יעקב

The LORD loveth the gates of Zion more than all the dwellings of Jacob.

The total value of verse 2 is 1858 in 400 gematria, and 319 in 22 gematria.

$$319 = 29 \times 11, \text{ and } 2911 - [319 \text{ rearranged as } 193] = 2718.$$

In 400 gematria, verse 2's TWENTY-EIGHT letters add up to 1858, while its first EIGHTEEN letters (printed in large type above) add up to 860. If we add 860 to 1858, we get 2718.

But the real point is TWENTY-EIGHT, and then EIGHTEEN (2818).

Verse 3 gives us the third group of four digits, 2845.

נכבדות מדבר בך עיר האלהים סלה

Glorious things are spoken of thee, O city of God. Selah.

The total value of verse 3 is 1216 in 400 gematria, and 235 in 22 gematria.

2845 is the product of 5 and 569, whose sum of 574 may be reversed and interpreted as 47×5 to give 235.

Verse 4 gives us the fourth group of four digits, 9045.

אזכיר רהב ובבל לידעי הנה פלשת וצר עם-כוש זה ילד-שם

I will make mention of Rahab and Babylon to them that know me:

behold Philistia, and Tyre, with Ethiopia; this man was born there.

The total value of verse 4 is 2607 in 400 gematria, and 429 in 22 gematria.

429 is the sum of 213 and 216. When we interpret 213 as $21^3 = 9261$, and subtract 216, we get 9045.

Verse 5 gives us the fifth group of four digits, 2353.

ולציון יאמר איש ואיש ילד-בה והוא יכוננה עליון

*And of Zion it shall be said, This and that man was born
in her: and the highest himself shall establish her.*

The total value of verse 5 is 1447 in 400 gematria, and 349 in 22 gematria.

Look at the seven digits 1447349. The two back-to-back numbers 144 and 37 add up to give 181, while 49 interpreted as [4 + 9] gives 13. $2353 = [181 \times 13]$.

Verse 6 gives us the sixth group of four digits, 6028.

יהוה יספר בכתוב עמים זה ילד-שם סלה

*The LORD shall count, when he writeth up the
people, that this man was born there. Selah.*

The total value of verse 6 is 1457 in 400 gematria, and 287 in 22 gematria.

When to 1457 we add [1457 rearranged as 4571], we get 6028.

Verse 7 gives us the seventh group of four digits, 7471.

ושרים כחללים כל-מעניי בך

*As well the singers as the players on instruments
shall be there: all my springs are in thee.*

The total value of verse 7 is 946 in 400 gematria, and 235 in 22 gematria.

When we arrange the digits 946235 in a row, read 94 as $9^4 = 6561$, interpret 6235 as two back-to-back numbers $26 \times 35 = 910$, and add 910 to 6561, we get 7471.

Look for a moment at verse 2 of the psalm. Word no 1 means 'loveth', word no 2 means 'the LORD', word no 3 means 'the gates of', word no 4 means 'Zion', word no 5 means 'more than all', word no 6 means 'the dwellings of', and word no 7 means 'Jacob.' Underneath the Hebrew I've set out the 400 gematric values of the seven words in left-to-right order. (אהב has a value of 8, יהוה has a value of 26, and so on.)

אהב יהוה שערי ציון מכל משכנות יעקב

8 26 580 156 90 816 182

The LORD loveth the gates of Zion more than all the dwellings of Jacob.

Many readers will notice that the first and last words of the verse.....

‘Never mind your credulous readers,’ cries Seth Prodie. ‘What you say has no theological substance. Please allow me to make a sensible contribution to this insane discussion.’ He pauses. ‘The Psalmist is talking about the dwellings of JACOB, and about things which God LOVETH. How can you possibly relate JACOB, and what God LOVETH, to your utterly useless number?’

‘Let me ask you two questions about the 400 gematria of verse 2, Seth,’ says Delia quietly. ‘What is the numerical value of JACOB’s name?’

‘One hundred and eighty-two,’ Prodie growls.

‘Correct.’ Delia inhales slowly. ‘What is the numerical value of the word which is rendered LOVETH?’

‘Eight,’ Prodie barks.

‘Right.’ Delia sets a page on the table. ‘Here’s the number e. Do you SUBMIT?’

2.7 **182 8 182 8** 459045235360287471

There are THREE 182s here: digits three, four, five; digits seven, eight, nine; and digits seven, six, five.

[182 x 182] + [182 minus ‘two eights’ interpreted as 28] = 33278

[2718 + 2818 + 2845 + 9045 + 2353 + 6028 + 7471] = 33278

Oh, apt cue, Miss Benn! Exit Seth Prodie. The tall man appears to be terrified.

Only a deluded soul prefers theological ash to the living lava of Scripture. Does Mr Prodie wants to turn the Bible into a narrowly religious *Book of the Dead*? Then let him go and live in the Tombs of the Ming Emperors. We which are alive and remain can look once again at the seven four-digit groups of the 28-digit e.

2718 2818 2845 9045 2353 6028 7471

Each four-digit group can be generated by certain numerical cells of its ‘own’ verse. Let me give you a few examples based on 400 gematric values.

לבני-קרח מזמור שיר יסודתו בהררי-קדש

92 **308** 293 510 486 417 404

Take the four digits 3082, and read them backward. 2803 – [2 + 80 + 3] = 2718.

אהב יהוה שערי ציון מכל משכנות יעקב

8 26 580 156 90 816 **182**

The last word’s value of 182, read backward as 281, and concatenated with the first word’s value of 8, gives 2818.

נכבדות מדבר בכ עיר האלהים סלה

482 246 22 280 91 95

The first word's value of 482, read backward as 284, and concatenated with the value of the last word's final letter, 5, gives 2845.

אזכיר רהב ובבל לידעי הנה פלשת וצר עם-כוש זה ילד-שם

238 207 40 124 60 810 302 110 326 12 44 340

Look at the four digits 8207. $8207 + 820 + [8 + 2] + 8 = 9045$.

ולציון יאמר איש ואיש ילד-בה והוא יכוננה עליון

192 251 311 317 447 18 141 166

The number 13 may be read starting on the sixth digit from the start, and the number 181 may be read starting on the sixth digit from the end. $13 \times 181 = 2353$.

יהוה יספר בכתוב עמים זה ילד-שם סלה

26 350 430 160 12 44 340 95

Look at the five digits 16012. By adding 16 to 6012, we get 6028.

ושרים כחללים כל-מעניי בכך

556 138 50 180 22

Before we stop, look at what can be done with the last seven digits of verse 7.

$$- [501 + 50] + 8022 = 7471$$

'Listen,' says Rosie. '[73 x 73] - [373 x 7] = 2718.' She pauses. 'Do you know of any Biblical verse that has a total 400 gematric value of 2718?'

Yes. Look up Genesis 5. 21, Numbers 6. 16, Numbers 22. 41, Deuteronomy 29. 4, Joshua 15. 17, I Samuel 17. 58, II Kings 20. 7, Nehemiah 12. 30, and Psalm 65. 11 (AV = 65. 10). Then ask yourself if it's right to go looking for the number e in any one of these verses. I'm not sure myself. Psalm 65. 11 speaks of the genial blessing of God which brings about *growth*, so it may contain a reference to e.

תלמיה רוה נחת גדודיה ברביבים תמגגנה צמחה תברך

Thou waterest the ridges thereof abundantly: thou settlest the furrows thereof: thou makest it soft with showers: thou blessest the springing thereof.

HOW TO REMEMBER THE FIRST TWENTY-EIGHT DIGITS OF e

The *Unfinished Symphony* of Schubert is sounding in the kitchen while I write these words. That symphony has terrified me from my earliest years. For no reason I decide to numerate the words 'Schubert', 'Unfinished', and 'Symphony' in 800 English gematria. SCHUBERT adds up to 708, which is what mathematicians call the 27-gonal number of eight. UNFINISHED adds up to 541, which is the hexagon-based dodecagonal number of ten, SYMPHONY adds up to 1728, which apart from being the cube of twelve is an anagram of 2718. For its part 2718 is what mathematicians call the 43-gonal number of twelve. 'I see it as highly significant,' says the third Elsie, 'that 4312 is an anagram of 3142.'

It is a fact of human life that different persons do certain things in different ways. (A British sawyer cuts on the push-stroke, while a Japanese sawyer cuts on the pull-stroke.) Different readers may choose to remember the 28-digit value of e in different ways. After studying the cryptograms of Psalm 87, some readers may decide to divide the digits 2718281828459045235360287471 into seven groups of four digits. Those readers will learn off e in seven days.

2718 2818 2845 9045 2353 6028 7471

Other readers may prefer to do the job in four days, as follows.

Day 1: learn the first two digits 2 and 7. (Remember that the gematric value of SCHUBERT is a 27-gonal number.)

2 7

Day 2: learn the next eight digits 1828 and 1828. (Schubert died in 1828.)

1 8 2 8 1 8 2 8

Day 3: learn the next six digits 45, 90, and 45. (Tell yourself that two forty-fives make ninety, and then imagine a cowboy called Ninety wearing two forty-fives.)

4 5 9 0 4 5

Day 4: write the number 21 with a wide space between its two digits. In the said space write *three palindromic numbers*: 353, 181, and 747.

2 3 5 3 1 8 1 7 4 7 1

The palindromic number 181 encodes the four digits 6028, as follows.

$$181 = [44 \times 137], \text{ and } [44 \times 137] = 6028$$

Now the third Elsie wants to point out that $21 + 353 + 181 + 747 = 31 \times 42$. His observation is memorable enough. But let me go further, because it is possible to encapsulate the 28-digit value of e in a one-word mnemonic.

$$27 + 1828 + 1828 + 45 + 90 + 45 + 21 + 353 + 181 + 747 = 5 \times 1033$$

$5 + 1033 = 1038$. In 800 Greek gematria 1038 is the value of the *nom de plume* Συνεκλεκτή (= Elect-with-you: see I Peter 5. 13). That *nom de plume* was borne by a person, not by a church, and it encodes an important piece of information.

2 7

1 8 2 8 1 8 2 8

4 5 9 0 4 5

2 3 5 3 1 8 1 (= 44 + 137, and 44 x 137 = 6028) 7 4 7 1

Whatever the case, we must always respect THE PRIMACY OF THE BIBLICAL TEXT. Both the text and the mathematical subtext of Psalm 87 are concerned with two facts: the salvation of the world, and the regeneration of an individual soul. Never imagine that a sinner saved by grace needs to know about *e*.

Mind you, if we conceive of *e* as the number of growth, or as the number of development, we may ask ourselves whether Moses has encoded its first four digits in the opening verse of Exodus.

וְאֵלֶּה שְׁמוֹת בְּנֵי יִשְׂרָאֵל הַבָּאִים מִצְרַיִם אֵת יַעֲקֹב אִישׁ וּבֵיתוֹ בְּאוֹ

Now these are the names of the children of Israel, which came into Egypt; every man and his household came with Jacob.

Exodus 1. 1's 400 gematric values add up to 3161.

$$42 + 746 + 62 + 541 + 58 + 385 + 401 + 182 + 311 + 424 + 9 = 3161$$

Its 22 gematric values add up to 443.

$$24 + 62 + 26 + 64 + 31 + 79 + 23 + 47 + 32 + 46 + 9 = 443$$

2718 is the difference between the two totals.

$$3161 - 443 = 2718$$

I wonder if Solomon has encoded *e* in the first verse of the Song of Songs, whose four Hebrew words (שִׁיר הַשִּׁירִים אֲשֶׁר לְשִׁלְמֹה) add up in 400 gematria to 1981.

$$[1 \times 981] + [19 \times 81] + [198 \times 1] = 2718$$

Whatever the case, I'll conclude by pointing out that the sophistication of gematric usage allows one number in certain circumstances to represent another number. Let me give you three notable examples of what I mean. You may find it useful to commit the following panel to memory.

**In the mathematics of ancient Israel,
545 can denote minus one,
37 can denote *i*, and
486 can denote *e*.**

Hark, the doorbell! Jane Dasey has come over to borrow a harp. We'll end chapter 27 as we began it. Psalm 87 contains seven verses whose first letters are respectively *lamedh aleph nun aleph wau yodh wau*, and whose last letters are respectively *shin beth he mem nun he kaph*. The fourteen letters which I've named add up in 400, 22, 406, and 28 gematria respectively to 526, 121, 1526, and 356. Two mnemonics may hide in the four gematric totals.

$$[526 + 121 + 1526 + 356] = 2529, \text{ and } [25 \times 29] = [215 + 510], \text{ and } [2^{15} + 510] = 33278$$

$$[526 - 121 + 1526 - 356] = 1575 = [\text{melodic } a + \text{Alamothe } d + \text{the notation-number } 135]$$

CHAPTER 28: UPON THE CIRCLE OF THE EARTH

.....he set a compass upon the face of the depth.....

Proverbs 8. 27

Last night Reginald Dacke recited his new epic, *Sylvia's Eggs are Tritone Gaps*. Then he made a 'thirty-minute postcolonial attack' on Evelyn Waugh. I listened. Delia and Lettuce Girl occupied themselves by creating a set of mnemonic dominoes for the notes of the Shalishim and Gittith scales! At nine o'clock the chairman saluted 'Reginald Dacke's genius, revelations, humanitarianism.' When some professor from Leeds asked a question about Lord Circumference, I began to think about the number *pi*, and about today's work.

A single word from the book of Genesis will give us a 10-digit value for *pi*, and a single verse from the book of I Kings will give us a 53-digit value for *pi*.

Look at Genesis 10. 25 (= I Chronicles 1. 19).

And unto Eber were born two sons: the name of one was Peleg; for in his days was the earth divided; and his brother's name was Joktan.

The Flemish cartographer whom we call 'Mercator' was christened *Gheert Cremer*. What name Peleg was given by his parents I don't know. 'Peleg' is a title rather than a name. The Hebrew word pe-lamedh-gimel really means 'The First Geometer' (in the proper sense of the word *geometer* -- one who measures the earth). Here is how Peleg did NOT get his name.

EBER [*who is now three hundred and fourteen years old*] Hey, look, everybody! The single land-mass, which will one day be called Pangaea, is dividing up into CONTINENTS! [*He pauses.*] This dramatic event is taking place during the lifetime of MY FIRST SON, who is now fifteen years old, and who, because I've been so busy, does not yet have a NAME! Well, well. I shall commemorate the division of Pangaea by naming my son 'Division', or 'PELEG' in Hebrew. It's a pity that the poor boy has had to wait so long for a name, but better late than never!

Peleg's name in Hebrew comprises the three letters pe, lamedh, and gimel.

ג ל פ

If we want to understand the geometrical basis of Peleg's name, we need to employ all four of the Hebrew numerical alphabets.

| | | | | |
|---|---|--------------|---|-----|
| In the 400 gematric alphabet, pe-lamedh-gimel | = | 80 + 30 + 3 | = | 113 |
| In the 22 gematric alphabet, pe-lamedh-gimel | = | 17 + 12 + 3 | = | 32 |
| In the 406 gematric alphabet, pe-lamedh-gimel | = | 81 + 74 + 83 | = | 238 |
| In the 28 gematric alphabet, pe-lamedh-gimel | = | 18 + 29 + 38 | = | 85 |

The 52 digits of these gematric values, which add up to 5911, generate formulae for a 53-digit value of π , as follows.

3.1415926535897932384626433832795028841971693993751058

| | | |
|------------|----------|--|
| 3 | = | 3 |
| 14 | = | 8 + 6 |
| 159 | = | 4 + 0 + 155 |
| 265 | = | 236 + 57 + 0 - 4 - 8 - 8 - 2 - 6 |
| 358 | = | - 7 + 478 - 61 - 0 - 3 - 7 - 43 + 5 - 4 |
| 979 | = | 485 + 521 - 17 - 6 - 8 + 0 + 4 |
| 323 | = | 87 + 240 + 7 - 7 - 4 |
| 846 | = | - 3 + 864 + 0 - 15 |
| 264 | = | - 52 + 365 + 7 + 0 - 48 - 8 |
| 338 | = | 267 + 47 + 8 + 6 + 10 |
| 327 | = | 374 + 3 - 54 + 4 |
| 950 | = | 855 + 211 - 76 + 8 + 0 - 48 |
| 288 | = | 7 + 240 + 7 + 74 - 38 - 6 + 4 + 0 |
| 419 | = | 1 + 55 - 2 + 365 |
| 716 | = | 704 + 8 + 8 + 2 - 6 |
| 939 | = | 74 + 7 + 861 + 0 - 3 |
| 937 | = | - 74 - 3 + 5 + 4 + 485 + 521 - 1 |
| 510 | = | 7 + 6 + 8 + 0 + 487 + 2 |
| 58 | = | 40 + 7 + 7 + 4 |

A modern Hiram might engrave his equation-set on a tablet of slate, using 258 characters. Note that in 400 gematria the name of Hiram (הִירָם) adds up to 258.

| | | | | | | | | |
|---|---|--------------------|--|--------------------|--|--------------------|--|--------------|
| 3 | | 8+6 | | 4+0+155 | | 236+57+0-4-8-8-2-6 | | -7+478-61- |
| 0 | - | 3-7-43+5-4 | | 485+521-17-6-8+0+4 | | 87+240+7-7- | | |
| 4 | | -3+864+0-15 | | -52+365+7+0-48-8 | | 267+47+8+6+1 | | |
| 0 | | 374+3-54+4 | | 855+211-76+8+0-48 | | 7+240+7+74-3 | | |
| 8 | - | 6+4+0 | | 1+55-2+365 | | 704+8+8+2-6 | | 74+7+861+0-3 |
| | - | 74-3+5+4+485+521-1 | | 7+6+8+0+487+2 | | 40+7+7+4 | | |

The historical Hiram could have used the Hebrew letters א, ב, ג, ד, ה, ו, ז, ח, ט, ש, נ (short for נתן = give), ל (short for לקח = take away), and ת (short for תם = [punctuative] stop) to represent respectively 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, +, -, and |. It may be that such a π tablet as I have envisaged is buried somewhere in the soil of Israel, together with an e tablet, an i' tablet, a ϕ tablet, square root tablets, cube root tablets, and Davidic musical instruments. Let us wait patiently for literate archaeologists to do their work.....

‘.....while we do ours,’ says Rosie. ‘The nineteen π -groups add up to 8693.’

‘And the digits of the verse’s twenty gematric values are used exactly three times,’ says Delia, ‘so the title-total will be three times 5911, which is 17733.’

Good show! It remains for us to work out the total of the two-linking numbers.

Digit number 1 of I Kings 7. 23's fifty-two gematric digits goes with digit number 1 of the 53-digit value of *pi*.

Digit number 2 of I Kings 7. 23's fifty-two gematric digits goes with digit number 2 of the 53-digit value of *pi*.

Digit number 4 of I Kings 7. 23's fifty-two gematric digits goes with digit number 4 of the 53-digit value of *pi*.

Digit number 9 of I Kings 7. 23's fifty-two gematric digits goes with digit number 7 of the 53-digit value of *pi*.

Digit number 20 of I Kings 7. 23's fifty-two gematric digits goes with digit number 10 of the 53-digit value of *pi*.

Digit number 33 of I Kings 7. 23's fifty-two gematric digits goes with digit number 13 of the 53-digit value of *pi*.

Digit number 45 of I Kings 7. 23's fifty-two gematric digits goes with digit number 16 of the 53-digit value of *pi*.

Digit number 1 of I Kings 7. 23's fifty-two gematric digits goes with digit number 19 of the 53-digit value of *pi*.

Digit number 8 of I Kings 7. 23's fifty-two gematric digits goes with digit number 22 of the 53-digit value of *pi*.

Digit number 18 of I Kings 7. 23's fifty-two gematric digits goes with digit number 25 of the 53-digit value of *pi*.

Digit number 27 of I Kings 7. 23's fifty-two gematric digits goes with digit number 28 of the 53-digit value of *pi*.

Digit number 34 of I Kings 7. 23's fifty-two gematric digits goes with digit number 31 of the 53-digit value of *pi*.

Digit number 46 of I Kings 7. 23's fifty-two gematric digits goes with digit number 34 of the 53-digit value of *pi*.

Digit number 6 of I Kings 7. 23's fifty-two gematric digits goes with digit number 37 of the 53-digit value of *pi*.

Digit number 13 of I Kings 7. 23's fifty-two gematric digits goes with digit number 40 of the 53-digit value of *pi*.

Digit number 20 of I Kings 7. 23's fifty-two gematric digits goes with digit number 43 of the 53-digit value of *pi*.

Digit number 28 of I Kings 7. 23's fifty-two gematric digits goes with digit number 46 of the 53-digit value of *pi*.

Digit number 40 of I Kings 7. 23's fifty-two gematric digits goes with digit number 49 of the 53-digit value of *pi*.

Digit number 48 of I Kings 7. 23's fifty-two gematric digits goes with digit number 52 of the 53-digit value of *pi*.

Now we'll multiply the place-number of each gematric digit from I Kings 7. 23 by the place-number of its pertinent *pi*-digit, and add up the nineteen products.

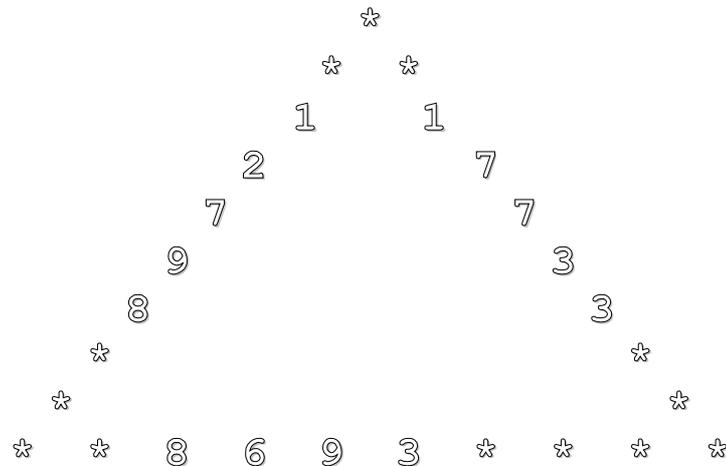
$$[1 \times 1] + [2 \times 2] + [4 \times 4] + [9 \times 7] + [20 \times 10] + [33 \times 13] + [45 \times 16] = 1433$$

$$[1 \times 19] + [8 \times 22] + [18 \times 25] + [27 \times 28] + [34 \times 31] + [46 \times 34] = 4019$$

$$[6 \times 37] + [13 \times 40] + [20 \times 43] + [28 \times 46] + [40 \times 49] + [48 \times 52] = 7346$$

$$1433 + 4019 + 7346 = 12798$$

The two-linking total is 12798, the title-total is 17733, and the group-total is 8693. Rosie has constructed a triangle which shows links on the left, textual 'title' on the right, and groups on the ground.....



.....while Delia has contrived to compose two mnemonic equations. 'You won't approve,' she says. 'I've had to use an anagram in the second one.'

$$17733 - 12798 = [47 \times 105], \text{ and } [47 + 105] = [83 + 69]$$

$$17733 - 8693 = 12798 - [2 \times 1879]$$

No grounds for disapproval there! And here's another anagram. $[2 \times 79 \times 81] = 12798$. Let me point out, for the benefit of any palaeolycanthropes who are still on board, that 12798 is a *pseudovampire number*. Interested readers can pursue this alluring little matter for themselves.

'Look at the difference between the title-total and the group-total,' says Rosie. She holds out a strip of paper. 'It contains a clear reference to *pi*.'

$$17733 - 8693 = 80 \times 113$$

'That's good up to a point,' you say. 'One hundred and thirteen can certainly be taken as a clear reference to the 400 gematric value of Peleg, and therefore to *pi*. But what are we meant to see in the number eighty?'

'We're meant to see the initial letter of PELEG,' Delia replies at once. 'The ancient Israelites are bound to have used an abbreviation for *pi*.' She pauses. 'I reckon that they used the letter *pe*, which has a 400 gematric value of eighty.'

So *pe* was *pi*! (Offstage laughture from the palaeolycanthropes. Well, youse can laugh if youse want. Ah knowed we'd find morphic resonance if we kept goin' fer long enough.) Delia's deduction is perfectly sensible. And there's more to say.

12798 is an interesting number in its own right. When you subtract 12798 from its reversal 89721, you are left with 76923, which may be construed as the decimal expansion of $1 / 13$ with the leading zeroes omitted.

$$1 \text{ divided by } 13 = 0.076923$$

In other words, the two-linking total contains an oblique but unmistakeable reference to the 400 gematric value of PELEG (113), and therefore to *pi*.

I pointed out yesterday how the sophistication of gematric usage allows one number in certain circumstances to represent another number. Today I'll give you not three, but four examples of that representation. You may find it useful to commit the following panel to memory.

**In the mathematics of ancient Israel,
545 can denote minus one,
37 can denote *i*,
486 can denote *e*, and
113 can denote *pi*.**

'I reckon that *pi* was born in the heavenly Zion,' says Lettuce Girl suddenly. 'I'll tell you what I mean some time.'

Ooohhh! I'm weary, and Rosie is yawning helplessly. Before we stop for dinner, let us clear up the elementary matter of Hiram's molten sea, which has bemused more than one commentator.

Here goes. We'll talk in notional terms of an eighteen-inch cubit, and we'll use 3.142 as a value for *pi*. Bear in mind that in 400 Hebrew gematria the name of PELEG adds up to 113.

The internal circumference of the molten sea is 30 cubits.
The external circumference of the molten sea is 31.42 cubits.
The internal diameter of the molten sea is 9.548 cubits.
The external diameter of the molten sea is 10 cubits.
The rim of the molten sea has a thickness of 0.226 cubits, or a little over four inches.
In numerical language the thickness of the rim (2 x 0.113 cubits) offers a two-gun salute to the memory of PELEG.

Do we recognize the great antiquity of the 355 / 113 *pi*-formula? Then we should declare Peleg's true place in history by writing his Sinified name 法勒 on the left-hand side of a Chinese equation. In truth, as the Welsh poet Taliesin would say, *nyt oed vas y gywydeit* (= he was a profound subject for song). You'll notice that the equal-sign is flanked by two felicitous outriders: an eleven-stroke character on the left (勒), and a three-stroke character on the right (三).

法勒 = 三百五十五 / 一百一十三

Let us go on to acknowledge the ingenuity of Hiram, who has given us a 53-digit value for *pi*. Here is I Kings 7. 23 once again.

ויעש את הים מוצק עשר באמה משפתו עד שפתו

And he [Hiram] made a molten sea, ten cubits from the one brim to the other:

עגל סביב וחמש באמה קומתו

it was round all about, and his height was five cubits:

וקוה שלשים באמה יסב אתו סביב

and a line of thirty cubits did compass it round about.

The first word of the Hebrew verse (ויעש) has a 400 gematric value of 386. (Notice that $3 \times 86 = 258 =$ the 400 gematric value of HIRAM: cheth-yodh-res-h-mem.) The word ויעש also has a 22 gematric value of FIFTY-THREE.....

ויעש (wau-yodh-ayin-sin) = $6 + 10 + 16 + 21 = 53$

.....which refers cryptically to the number of digits in Hiram's value of *pi*.

3.1415926535897932384626433832795028841971693993751058

Look at the first digit, the twenty-seventh or middle digit, and the fifty-third or last digit of Hiram's value for *pi*.

3.1415926535897932384626433832795028841971693993751058

These three digits concatenate to give the number 388, which is the 400 gematric value of the three-word Hebrew sentence pe-lamedh-gimel cheth-yodh-res-h-mem cheth-wau-gimel. The sentence may be interpreted, 'Hiram divided [the] circle.' Do you see how the first of the three words is spelled?

פ ל ג ח י ר ם ח ו ג

'I must be dreaming,' says Greta Hegans. 'You've actually found an example of *equidistant digit spacing*.'

'And I've found a Hiram in I Kings 7. 23,' says Delia, as Rosie groans. 'In fact, I've found *three* Hiram's.' She points to a page of her notebook. 'Here are the 400 gematric values of the verse's twenty words.'

386 401 55 236 570 48 826 74 786 103 74 354 48 552 117 680 48 72 407 74

'Those gematric values contain fifty-two digits,' Miss Benn continues, 'which I've set out on one line, with no spaces. Look.' She turns the page over.

3864015523657048826747861037435448552117680487240774

'Now watch what happens when we divide Hiram's fifty-two digits into two groups of twenty-six,' says Delia. 'In each group the first digit is 3, the sixteenth

digit is 8, and the twentieth digit is 7. If we interpret the three digits 3, 8, and 7 as 387, and add one 387 to the other, we get 774.....'

| | | |
|------------------------|-------------|----------------|
| 386401552365704 | 8826 | 7478610 |
| 374354485521176 | 8048 | 7240774 |

'.....which is three times 258, the 400 gematric value of Hiram's name.' Miss Benn pauses. 'Why *three* times? Because *three*, or thirty divided by ten, is the author's little joke. Silly commentators will take three as Hiram's value for *pi*.....'

'While intelligent people will be provoked to look beneath the surface of the text, you observe modestly.

'Yes!' Delia rises to her feet. 'And there's more.' She holds out a strip of paper. 'Look at the two groups of twenty-six digits. Each group adds up to 116.'

$$3 + 8 + 6 + 4 + 0 + 1 + 5 + 5 + 2 + 3 + 6 + 5 + 7 + 0 + 4 + 8 + 8 + 2 + 6 + 7 + 4 + 7 + 8 + 6 + 1 + 0 = 116$$

$$3 + 7 + 4 + 3 + 5 + 4 + 4 + 8 + 5 + 5 + 2 + 1 + 1 + 7 + 6 + 8 + 0 + 4 + 8 + 7 + 2 + 4 + 0 + 7 + 7 + 4 = 116$$

'What's the big deal about 116?' you ask.

'116 is a cryptogram of Hiram's name,' replies Delia. 'In 400 gematria, HIRAM adds up to 258. Remember?' She turns over the strip of paper, and begins to dance like a Roman *pantomima*.

$$116 = [2 \times 58] = \text{by interpretation } 258 \text{ (cheth-yodh-res-h-mem)}$$

'You've done a wonderful job, dear,' says Greta.

'I've noticed two tiny things,' says Miss Benn. 'Don't flatter me! There's a lot more waiting to be found in the subtext of I Kings 7. 23.'

'Do you reckon that the subtext is concerned only with *pi*?' asks Greta.

'No,' Delia replies helpfully.

'Listen,' says Rosie in a plangent voice. 'You clever people are exhausting me.' She pauses. '*Please* can we do something different tomorrow?'

Certainly! In chapter 29 we shall address ourselves to a number of authorial and referential cryptograms. It won't do us any harm to take a break from serious mathematics. I mean to say, it'll be nice if we can reach chapter 30 with a few readers still on board. Before you adepts leave, humour me by studying the panel which appears below. The panel contains four gematric values which add up to 1181.

**In the mathematics of ancient Israel,
 486 can denote *e*,
 37 can denote *i*,
 113 can denote *pi*, and
 545 can denote minus one.**

‘Hold on,’ says Delia. ‘There is music in all four of those numbers.’

As Rosie groans for a second time, Miss Benn points to a page of her notebook.

486 is the unitary string-length of the note c' .

37 is the unitary minor-tenth difference between the note b''' (= 64) and the note d''''' (= 27).

545 minus 113 gives us 432, the unitary string-length of the note d' .

113 in base 30 is 933 in base 10, and 933 is the string-length-plus-notation-number of the note d .

Without speaking, Miss Benn turns a page.

Four 933s in Genesis 1. 1

933 is the string-length-plus-notation-number of the note d .

The 400 gematric values of Genesis 1. 1's seven Hebrew words involve twenty digits: 9-1-3-2-0 3 8 6-4-0-1-3-9 5 4 0 7-2-9-6.

Start on the first digit and read forward: $913 + 20 = 933$.

Start on the thirteenth digit and read backward: $931 + 0 - 4 + 6 = 933$.

Start on the last digit and read backward: $6 + 927 = 933$.

What digits have we not used? Five, four, three, zero, and eight. *Ei hätää!* (= No problem!). Five to the power four plus 308 equals 933.

‘Sorry, everyone,’ says Delia. ‘I have im-*pi*-ously strayed from the subject of our discussion.’ She rises to her feet. ‘Yesterday afternoon I happened to notice the 933s in Genesis 1. 1.

‘It occurred to me later that the author of II Samuel 1. 18 must have noticed them as well.’ Miss Benn pauses. ‘Anyway! Here’s what I really meant to tell you.

‘In 400-plus-22 gematria the last verse of Psalm 87 adds up to 1181.

‘And the four Hebrew words whose 400 gematric values add up to 1181 have 22 gematric values which add up to 173. Furthermore, 1181 in base 10 is 173 in base 31.

‘I should add that 1181 encodes the twelfth root of two, 1.0594631. Ten times fifty-nine times forty-six times thirty-one is 841340, and 841 plus 340 is 1181.’ Delia smiles mischievously. ‘That’ll do us for today. Poor Rosie is beginning to look like Lucia di Lammermoor.’

Any number may stimulate a person whose mind is not empty. A certain theatre in Antwerp can seat 1181 persons. What’s more, the hymn ‘*Alma chorus*’ was said to have been sung by the Norwegian King Sverrir, during a battle near Nordnes, in the year 1181.

For its part the twelfth root of two may be linked with 173, and with Genesis 1. 1.

HOW SEVEN DIGITS GENERATE AN EIGHT-DIGIT NUMBER

Genesis 1. 1 contains seven Hebrew words whose 400 gematric values many readers have come to know by heart.

913 203 86 401 395 407 296

These seven values add up to 2701, or to $[37 \times 73]$. When you add $[377 \times 3]$ to $[37 \times 73]$, while acting in a spirit of exploratory research, you get 3832.

3832 happens to be the sum of the four numbers 1110, 1413, 98, and 1211. Humour me by reading 1110 as 'eleven-ten', 1413 as 'fourteen-thirteen', 98 as 'nine-eight', and 1211 as 'twelve-eleven'. Then set out the twenty digits of Genesis 1. 1's seven gematric values.

9 1 3 2 0 3 8 6 4 0 1 3 9 5 4 0 7 2 9 6

Number these digits from one to twenty.

1.9 2.1 3.3 4.2 5.0 6.3 7.8 8.6 9.4 10.0 11.1 12.3 13.9 14.5 15.4 16.0 17.7 18.2 19.9 20.6

Then look at the seven consecutive digits which you have numbered eight, nine, ten, eleven, twelve, thirteen, and fourteen.

9 1 3 2 0 3 8 6 4 0 1 3 9 5 4 0 7 2 9 6

From 'eleven-ten' (= digits 11 and 10) you get 10, from 'fourteen-thirteen' (= digits 14 and 13) you get 59, from 'nine-eight' (= digits 9 and 8) you get 46, and from 'twelve-eleven' (= digits 12 and 11) you get 31.

6 4 0 1 3 9 5

01 95 64 13 10 59 46 31

Like the French composer Guillaume de Machaut, you can say *Ma fin est mon commencement*, because you have ended up tail-in-mouth on the digit that you started with.

Let me repeat that 3832, or $[37 \times 73]$ plus $[377 \times 3]$, is the sum of the four numbers 1110, 1413, 98, and 1211. All four of these numbers belong to the series 1, 21, 32, 43, 54, 65, 76, 87, 98, 109, 110, 1211, 1312, 1413, and so on (Artur Jasinski's A127423 in *The On-Line Encyclopedia of Integer Sequences*).

Any ancient Israelite who wanted to devise a mnemonic for the twelfth root of two could have employed Genesis 1. 1 exactly as you have done. Ignore the person who accuses you of having behaved in an anachronous manner. The simple piece of numerical work which you have executed would not have lain beyond the ability of ancient Israelite musicians. (Evolution is bunk. Don't imagine that people of the nineteenth, twentieth, and twenty-first centuries are supremely clever beings. They aren't. Supremely clever beings would have found a clean and cheap replacement for filthy fossil fuels. It may be that such a replacement will be discovered only when some rather ordinary person is emboldened to write a speculative equation.)

Anyway! You have discerned the twelfth root of two in seven consecutive digits of Genesis 1. 1, and having once discerned it you will never forget it. Delia is pleased to observe that $01 + 95 + 64 + 13 = 173$.

6 4 0 1 3 9 5 01 95 64 13 10 59 46 31

CHAPTER 29: ONE IN A CERTAIN PLACE

"Now we are ready, I think, for any assault of the Indians;
Let them come, if they like, and the sooner they try it the better --
Let them come, if they like, be it sagamore, sachem, or pow-wow,
Aspinet, Samoset, Corbitant, Squanto, or Tokamahamon!"

Henry Wadsworth Longfellow, 'The Courtship of Miles Standish'

All British people have plain names, and that works pretty well over there.

Paris Hilton

In bog or quagmire deep and dank
His foot shall never settle;
He mounts the summit of Mont Blanc,
Or Popocatapetl.

John Quincy Adams, 'To Sally'

A SIMPLE AND INFALLIBLE PROOF OF WITLESSNESS

Every so often a man who stands in a pulpit feels obliged to make fatuous use of a proper noun. Instead of saying *As we eat our breakfast*, or even *As we eat our breakfast cereal*, he employs the name of a well-known cereal manufacturer, and says *As we eat our Kellogg's*. Those who grin or laugh, in the belief that the man has said something funny, are COMPLETELY WITLESS. So is the man himself.

Today, as we meet in Lettuce Girl's herb-garden, we need to maintain a steady pace. The sun is shining with all his might, paradisaal perfumes enfold us, and we have a lot of material to get through. Let me start by asking and answering a question. Why do certain poets use particular proper nouns at times? *Because they feel obliged to obey a number of unwritten rules.* One such rule follows.

IF YOU WANT TO BE TAKEN SERIOUSLY, MENTION THE VALE OF TEMPE.

Thus Nathaniel H Carter writes in 'Pains of the Imagination':

*The flag of freedom from Olympus streams,
Through Tempe's vale the blaze of cannon gleams.....*

Hartley Coleridge writes in 'Ideality':

*The vale of Tempe had in vain been fair,
Green Ida never deem'd the nurse of Jove.....*

William Collins writes in 'The Passions':

*They would have thought, who heard the strain,
They saw in Tempe's vale her native maids.....*

Mary Abel Clinkett writes in 'To the Muses':

*How unfrequented are your classic Groves,
Temp's sweet vale, poetic Arno's stream;
No Homer tunes the lyre, no Virgil roves,
Inspir'd by you, with fancy's golden dream.*

Hannah More writes in 'Slavery':

*In all the love of HOME and FREEDOM reign:
And Tempe's vale, and parch'd Angola's sand,
One equal fondness of their sons command.*

Percy Shelley writes in 'Hymn of Pan':

*Liquid Peneus was flowing,
And all dark Tempe lay
In Pelion's shadow.....*

John Keats writes in 'Ode on a Grecian Urn':

*Thou still unravish'd bride of quietness,
Thou foster-child of Silence and slow Time,
Sylvan historian, who canst thus express
A flowery tale more sweetly than our rhyme:
What leaf-fring'd legend haunts about thy shape
Of deities or mortals, or of both,
In Tempe or the dales of Arcady?*

Anna Laetitia Barbauld writes in 'Eighteen Hundred and Eleven':

*And now the vagrant Power no more detains
The vale of Tempe, or Ausonian plains;
Northward he throws the animating ray,
O'er Celtic nations bursts the mental day:
And, as some playful child the mirror turns,
Now here now there the moving lustre burns;
Now o'er his changeful fancy more prevail
Batavia's dykes than Arno's purple vale,
And stinted suns, and rivers bound with frost,
Than Enna's plains or Baia's viny coast;
Venice the Adriatic weds in vain.....*

The vale of Tempe in Thessaly is what scholars call 'one of the loci of literature'.

Venice, together with the river Brenta and the Adriatic Sea, belongs to the same kind of literary atlas. In the fourth canto of *Childe Harold's Pilgrimage*, Byron mentions 'The deep-dyed Brenta'. And Pushkin sings in *Eugene Onegin* 1. 49,

Адриатические волны, Waves of the Adriatic Sea,
О Брента! О Brenta!

One of my lady readers may explain why Henry Wadsworth Longfellow speaks about a person called Tokamahamon, why John Quincy Adams speaks about

Popocatepetl, why Reginald Heber speaks about 'cool Siloam's shady rill', and why John Milton speaks about one of the Canary Islands.

*On th' other side, Satan alarmed
Collecting all his might dilated stood,
Like Teneriffe or Atlas unremoved.....*

That lady reader may explain why a certain preacher calls Amos *the herdsman of Tekoa* when he doesn't know where Tekoa is, and why another preacher mentions *Uriah Heep* when he has never read a page of Charles Dickens, and why a third preacher says *Ur of the Chaldees* when he has no idea what a Chaldee is. But I wonder if the same lady reader will be able to explain why two persons called JANNES and JAMBRES are mentioned by name in II Timothy 3. 8.

Now as Jannes and Jambres withstood Moses, so do these also resist the truth: men of corrupt minds, reprobate concerning the faith.

Look for a moment at Exodus 7. 10-13.

And Moses and Aaron went in unto Pharaoh, and they did so as the LORD had commanded: and Aaron cast down his rod before Pharaoh, and before his servants, and it became a serpent. Then Pharaoh also called the wise men and the sorcerers: now the magicians of Egypt, they also did in like manner with their enchantments. For they cast down every man his rod, and they became serpents: but Aaron's rod swallowed up their rods. And he hardened Pharaoh's heart, that he hearkened not unto them; as the LORD had said.

Here is a curious fact. Not one of the wise men, sorcerers, and magicians who opposed Moses in Exodus 7. 11-12 is named anywhere in the Old Testament. Jannes and Jambres cannot be said to constitute 'one of the loci of literature'. Is St Paul at pains merely to preserve a piece of genuine historical lore? No! He is concerned to furnish his readers with A PRECISE REFERENCE. You see, the full Hebrew title of the book of Exodus (= *Now these are the names*) runs as follows.

וּאלֹהֵי שְׁמוֹת

In 400 Hebrew gematria the two words wau-aleph-lamedh-he shin-mem-wau-tau add up to 788.

The phrase *Jannes and Jambres* is represented in Greek thus.

ιαννης και ιαμβρης

In 800 Greek gematria the three words iota-alpha-nun-nun-eta-sigma kappa-alpha-iota iota-alpha-mu-beta-rho-eta-sigma add up to 711. The number 711 must be construed in two manners.

711 = chapter 7, verse 11 of Exodus.

Then Pharaoh also called the wise men and the sorcerers: now the magicians of Egypt, they also did in like manner with their enchantments.

711 = by interpretation 711 + [7 x 11] = 788, the 400 gematric value of wau-aleph-lamedh-he shin-mem-wau-tau (= Hebrew title of the book of Exodus).

What is going on? Nothing frivolous. The writers who are completing the Word of God want to make the whole Bible accessible for study. In a number of cases they encode chapter-and-verse references by using curious pieces of language WHICH CANNOT BE OTHERWISE EXPLAINED.

I'll give you a second example. The Psalter is denoted in Hebrew by the word tau-he-lamedh-yodh-mem. That word has a 400 gematric value of 485 and a 22 gematric value of 62. In Hebrews 2. 6 St Paul quotes Psalm 8. 5 (AV, Psalm 8. 4). He precedes his quotation with the words διεμαρτυρατο δε που τις (= But one in a certain place testified).

ΤΟΥ ΤΙΣ = one in a certain place

In 800 Greek gematria the word που (= in a certain place) adds up to 550, and the word τις (= one) adds up to 510. These two values combine to give the number 1060. When the 400 gematric value of tau-he-lamedh-yodh-mem (485 = [97 x 5]), interpreted as 975, is subtracted from 1060, the number 85 remains.

1060 – 975 = 85 = Psalm 8, verse 5

Let me run quickly through a number of other examples.

Hebrews 5. 6 contains the two Greek words epsilon-nu epsilon-tau-epsilon-rho-omega-iota (= IN ANOTHER PLACE). St Paul is referring to Psalm 110. 4. His two referential words have a 24 gematric value of 97, which when added to its own reversal becomes 176. Remember that the Hebrew word tau-he-lamedh-yodh-mem (= PSALMS) has a 22 gematric value of 62.

[97 + 79] = 176 = [62 (= PSALMS) + 110 + 4]

Hebrews 4. 4 contains the Greek word omicron-epsilon-tau-omega-sigma (= ON THIS WISE). St Paul is referring to Genesis 2. 2. His referential word has an 800 gematric value of 1770. The Hebrew title beth-resh-aleph-shin-yodh-tau (= GENESIS) has a 22 gematric value of 76. For their part the Genesis chapter-and-verse numbers may be interpreted to give 22.

1770 – [76 + 22] = 76 x 22

I Corinthians 15. 54 contains the four Greek words omicron lambda-omicron-gamma-omicron-sigma omicron gamma-epsilon-gamma-rho-alpha-mu-mu-epsilon-nu-omicron-sigma (= THE SAYING THAT IS WRITTEN). St Paul is referring to Isaiah 25. 8. His referential words have a 24 gematric value of 196. The Hebrew title yodh-shin-ayin-yodh-he (= ISAIAH) has a 22 gematric value of 62. For their part the Isaiah chapter-and-verse numbers may be interpreted to give 258.

196 = 258 – 62

Romans 1. 17 contains the two Greek words kappa-alpha-theta-omega-sigma gamma-epsilon-gamma-rho-alpha-pi-tau-alpha-iota (= AS IT IS WRITTEN). St Paul is referring to Habakkuk 2. 4. His referential words have a 24 gematric

value of 135. The Hebrew name cheth-beth-qoph-wau-qoph (= HABBAKUK) has a 22 gematric value of 54. For their part the Habakkuk chapter-and-verse numbers may be interpreted to give 24.

$$[54 \times 24] = 1296, \text{ and } [129 + 6] = 135$$

Romans 15. 11 contains the Greek word pi-alpha-lambda-iota-nu (= AGAIN). St Paul is referring to Psalm 117. 1. His referential word has an 800 gematric value of 171. You recall that the Hebrew word tau-he-lamedh-yodh-mem (= PSALMS) has a 22 gematric value of 62.

$$171 + [1 + 7 + 1 \text{ (again!)}] = 62 + 117 + 1$$

Does the New Testament ever refer to *itself*? Oh, yes. Verse 5 of II John contains the two Greek words alpha-pi alpha-rho-chi-eta-sigma (= from [inarticulate] beginning). St John is referring to chapter 13, verse 34 of his own gospel, which begins epsilon-nu alpha-rho-chi-eta-iota (= in [inarticulate] beginning). His referential words have an 800 gematric value of 990 and a 24 gematric value of 82. The Greek name iota-omega-alpha-nu-nu-eta-sigma (= JOHN) has an 800 gematric value of 1119. Consider the following equation.

$$[990 + 82] = 1119 - [13 + 34]$$

Now look at a seven-word phrase from John 21. 7:

ο μαθητης εκεινος ον ηγαπα ο Ιησους

(= that disciple whom Jesus loved).

Bearing in mind that the Greek name of JOHN (iota-omega-alpha-nu-nu-eta-sigma) has an 800 gematric value of 1119, let us work out meticulously the total 800 gematric value of ο μαθητης εκεινος ον ηγαπα ο Ιησους.

omicron = 70

mu-alpha-theta-eta-tau-eta-sigma = 40 + 1 + 9 + 8 + 300 + 8 + 200 = 566

epsilon-kappa-epsilon-iota-nu-omicron-sigma = 5 + 20 + 5 + 10 + 50 + 70 + 200 = 360

omicron-nu = 70 + 50 = 120

eta-gamma-alpha-pi-alpha = 8 + 3 + 1 + 80 + 1 = 93

omicron = 70

iota-eta-sigma-omicron-upsilon-sigma = 10 + 8 + 200 + 70 + 400 + 200 = 888

$$70 + 566 + 360 + 120 + 93 + 70 + 888 = 2167$$

$$2167 = [11 \times 197]$$

[11 x 197] = by interpretation '1119 (= John) in seven words'.

The 153 fish that we find in John 21. 11 may represent an authorial signature of which the human author was unaware! 153 in base 31 is 1119 in base 10.

Here is the Greek text of John 1. 1, set out in upper-case letters.

EN APXHI HN O ΛΟΓΟΣ
KAI O ΛΟΓΟΣ HN ΠΡΟΣ ΤΟΝ ΘΕΟΝ
KAI ΘΕΟΣ HN O ΛΟΓΟΣ

(= In the beginning was the **WORD**, and the **WORD** was with God, and the **WORD** was God).

The noun which appears three times in John 1. 1 (ΛΟΓΟΣ = Word) has an 800 gematric value of 373.

$$\text{lambda-omicron-gamma-omicron-sigma} = 30 + 70 + 3 + 70 + 200 = \underline{373}$$

Now watch.

$$[373 + 373 + 373] = 1119 \quad (= \text{JOHN})$$

You recall that the Hebrew text of Genesis 1. 1 adds up in 400 gematria to 2701. We get the number 2701 when we multiply the 400 gematric values of two Hebrew words.

$$\text{ח כ מ ה} \quad \times \quad \text{ה ב ל} \quad = \quad 2701$$

$$2701 = 73 \text{ (cheth-kaph-mem-he: WISDOM)} \times 37 \text{ (he-beth-lamedh:)}$$

The Greek text of John 1. 1 adds up in 800 gematria to 3627. We get the number 3627 when we multiply the 800 gematric values of two Greek words.

$$\alpha \gamma \alpha \pi \eta \quad \times \quad \alpha \lambda \eta \quad = \quad 3627$$

$$3627 = 93 \text{ (alpha-gamma-alpha-pe-eta: LOVE)} \times 39 \text{ (alpha-lamedh-eta: ERRANCY)}$$

While the subtext of Genesis 1. 1 speaks of CREATION (wisdom dealing with the square root of minus one), the subtext of John 1. 1 speaks of REDEMPTION (love dealing with human errancy).

Why does St John tell us four times in his gospel (6. 71, 12. 4, 12. 2, 13. 26) that Judas Iscariot was '[the son] of Simon'? The Greek word which means 'of Simon' (Σιμωνος) is spelled sigma-iota-mu-omega-nu-omicron-sigma, and it has a 24 gematric value of 109. What book of the Bible has a *one-hundred-and-ninth* chapter? Only the book of Psalms. John is showing us that Judas Iscariot is the subject of Psalm 109, 'the Judas psalm', from which St Peter will quote in Acts 1. 20. It is possible that the name *Iscariot* represents a shop-title combination of אשכר (= gift) with ריח (= perfume), and that Simon Iscariot was a purveyor of unguents. The son of such a man would be likely to know the market price of a pound of spikenard ointment (see John 12. 3-5). The Greek word rendered 'when they had sung an hymn' in Matthew 26. 30 and Mark 14. 26 (υμνησαντες) has a 24 gematric value of 126. I wonder if υμνησαντες encodes the number of an 'extra' psalm which was sung by the Lord Jesus and his disciples. How fitting would Psalm 126 have been?

Some readers will find pages 594-598 intolerably complicated, allusive, and terse.

The dark enigma of Genesis 9. 18-27 is encoded in 400 Hebrew gematria.

18 And the sons of Noah, that went forth of the ark, were Shem, and Ham, and Japheth: and Ham is the father of Canaan. 19 These are the three sons of Noah: and of them was the whole earth overspread. 20 And Noah began to be an husbandman, and he planted a vineyard: 21 And he drank of the wine, and was drunken; and he was uncovered within his tent. 22 And Ham, the father of Canaan, saw the nakedness of his father, and told his two brethren without. 23 And Shem and Japheth took a garment, and laid it upon both their shoulders, and went backward, and covered the nakedness of their father; and their faces were backward, and they saw not their father's nakedness. 24 And Noah awoke from his wine, and knew what his younger son had done unto him. 25 And he said, Cursed be Canaan; a servant of servants shall he be unto his brethren. 26 And he said, Blessed be the LORD God of Shem; and Canaan shall be his servant. 27 God shall enlarge Japheth, and he shall dwell in the tents of Shem; and Canaan shall be his servant.

Four questions occur to a vigilant reader.

1. Why does the author bother to say in verse 18 that Ham 'is the father of Canaan'? (Canaan is Ham's FOURTH son, according to Genesis 10. 6.)
2. Why does the author bother to call Ham 'the father of Canaan' in verse 22?
3. Why does the author say 'his younger son' in verse 24, rather than 'Ham'? (Noah had TWO younger sons.)
4. Why does Noah rename Ham 'Canaan' in verse 25?

We have to do here with a horrible piece of history. Ham, whose name is spelled Cheth-mem, is the inventor of a new SIN. Noah, whose name is spelled Nun-cheth, curses his son and gives him such a new NAME as will express what he 'had done unto' his father (see verse 24). So shameful is Ham's deed that it is veiled in cryptogram. Let me speak discreetly. What Ham did involved something much worse than an indecorous act of spectation. Ham's new name 'Canaan' [כנען = 20 + 50 + 70 + 50] adds up to 190, and 190 is the gematric value of 'Cheth-mem knew Nun-cheth' (חם ידע נח: cheth-mem yodh-daleth-ayin nun-cheth = [48 + 84 + 58]).

'The father of Canaan' in verses 18 and 22 is really the inventor of an evil practice who boasts about his invention. (In Genesis 4. 21-22, Jubal is called the 'father' of instrumental musicians, and Tubal-cain is called the 'father' of metalworkers.) After telling his two brothers about what he has done, the unrepentant Ham goes on to name one of his own sons 'Canaan'.

The phrase rendered 'the father of Canaan' (אבי כנען: see verses 18 and 22) has a gematric value of 203, while the phrase rendered 'his younger son' (בנו הקטן: see verse 24) has a gematric value of 222. Notice that 203 and 222 add up to 425. Then add up the fifth and sixth Hebrew words of Genesis 14. 11. The two words are spelled samekh-daleth-mem wau-ayin-mem-resh-he.

וַיִּקְחוּ אֶת כָּל רֶכֶשׁ סְדֹם וְעֹמֶרְהָ וְאֵת כָּל אֲכָלֵם וַיֵּלְכוּ

And they took all the goods of Sodom and Gomorrah, and all their victuals, and went their way.

[What sin was committed by Er (see Genesis 38. 6-7)? See what you can learn by working with the four gematric values of his name ער. Note two things about Genesis 38. 7: its 400 gematric value, and the fact that resh-ayin (= wicked) is the reversal of ayin-resh (= Er).]

Like Poe's story 'The Fall of the House of Usher', which very few critics understand, the tale of Ham and Noah may be read at two levels. Ham's spectative act is all that young readers need to know about. Older readers can be trusted to perceive the full truth.

You recall how Daniel 11. 37 begins in English: 'Neither shall he regard the God of his fathers, nor *the desire of women*.....' (המדת נשים: see page 431). In Hebrew the whole verse contains 17 words, or 55 letters. What is $17 \times 5 \times 5$? If you know that in Daniel 9. 25-26 the Hebrew word for 'Messiah' (משיח) is used twice without obliquity, you won't try to construe המדת נשים (= the desire of women) in Messianic terms. 'Every Jewish woman hoped that she would be the mother of the Messiah,' preachers often declare. Wrong. A long time ago some all-knowing male gave birth to this piece of nonsense, and unthinking persons, who believe that the Great Wall of China can be seen with the naked eye by a man standing on the moon, have repeated the nonsense ever since. (What has 'every Jewish woman' got to do with the word המדת? Daniel says 'the desire of women', not 'the desire of all Jewish women'.) The feminine Hebrew noun המדת (= desire) denotes here the proper desire which men feel for women. I wonder if the phrase איש המדות, which appears in Daniel 10. 11 and 19, really means 'man of desires', or *appetent man*. Having set his heart to understand (10. 12), the prophet is appetent for knowledge.

It behoves us now to look at Ecclesiastes 7. 23-29 in Hebrew and English. Any gematric work that we do will involve the 400 alphabet. Remember: the numerical value of סדם ועמרה (= Sodom and Gomorrah) is 425. Verse 25's expression רשע כסל והסכלות הוללות (rendered 'the wickedness of folly, even of foolishness and madness' in the AV) adds up to 1684, or to 4×421 . The sum of 4 and 421 is 425. Notice that the Hebrew verb מלט (= escape), which Solomon uses in verse 26, appears twice in Genesis 19. 17.

Who is the bitter and insidious 'woman' of verse 26? Look back for a moment to page 347, and don't assume that the 'woman' is any more literally female than the Preacheress who uses a feminine verb-form in verse 27. We can liquidate one absurd interpretation merely by asking and answering a question. Has the man who applied his heart to seek out wisdom in verse 25 suddenly become Wisdom herself in verse 27? No!

Try to interpret the total gematric value of verse 29 (4205). Then observe that in Hebrew the SEVEN verses of Ecclesiastes 7. 23-29 contain EIGHTY-EIGHT WORDS, or THREE HUNDRED AND FORTY-FOUR LETTERS. From that fact there springs the simple equation $344 + 88 - 7 = 425$.

For many centuries Ecclesiastes 7. 28 has been barbarously construed as follows. *Although you may occasionally find a virtuous man, you will never find a virtuous woman.* Why must theologians import the notion of virtue? The verse relates neither to a morally good man nor to a morally good woman. And yet the quest which it describes was so morally abominable that when Solomon repented he called himself THE COLLECTRESS (קהלת). Let me translate Ecclesiastes 7. 27-28 into explicit words.

Here is the intractably masculine fact which I have discovered, said the Collectress, as an unmanly one conjoined with an unmanly one, while trying to acquire a perfect understanding of what maleness is. I strove repeatedly with my whole being to acquire that perfect understanding, and failed to find it. FROM a thousand men I experienced only a uniform maleness, and never once IN any of those men did I find a genuinely feminine entity.

The contrite Solomon doesn't excuse himself, because he has no excuse. (He acted BY CHOICE.) Why has the Holy Spirit of God led him to record such a horrendous

confession in dark words? And why have Solomon's dark words waited so long for explication? I wonder. Did Solomon foresee that an enormously increased world population would one day be saturation-bombed by the doctrine of *madness and folly*? Or when he spoke about *the 'woman', whose heart is snares and nets, and her hands are bands*, did he foresee the ruthless manner in which preachers of that doctrine would treat both their dupes and their critics? (Guile, alluring yokes, subtle traps, assiduous propaganda, oppression.) I'm not sure: but if you want to understand the character of a confirmedly *more-bitter-than-death* person, Solomon tells you all that you need to know.

Listen to I Kings 11. 41. *And the rest of the acts of Solomon, and all that he did, and his wisdom, are they not written in the book of the acts of Solomon?* The book of the acts of Solomon has not survived. Listen to I Kings 5. 12 (AV, 4. 32). *And he spake three thousand proverbs: and his songs were a thousand and five.* Most of Solomon's three thousand proverbs have not survived. Furthermore, his songs WERE a thousand and five: that is, Solomon's thousand and five songs were not extant when the author of I Kings was writing. Had they been extant, the author would have said, Solomon WROTE a thousand and five songs. As it is, the author says that Solomon's songs WERE (ויהי). They no longer are. Why so? Because Solomon himself destroyed them.

Let me set out the skeleton of a long article that one of my readers can write. I'm still working in terms of 400 gematria. Solomon's thousand and five unextant songs were tainted with the והוללות וסכלות of Ecclesiastes 2. 12 (= and madness and folly: carefully compare the language of Ecclesiastes 7. 25). The phrase והוללות וסכלות has a gematric value of 1005. That fact is far more important than the following trio of equations.

$$1005 = 201 \times 5 \quad 425 = 5 \times 85 \quad 2105 - 1005 = 425 + 585$$

We must not dodge the expression הללות ושכלות (= madness and folly) which appears in Ecclesiastes 1. 17. Once again, carefully compare the language of Ecclesiastes 7. 25, and observe that הוללת ושכלות has a gematric value of 1233. Bearing in mind that 524 is the reversal of 425, see if you can make sense of the three equations that follow.

$$1233 = 137 \times 9 \quad 425 = 85 \times 5 \quad 1379 - 855 = 524$$

Notice that the phrase חמשה ואלף (= a thousand and five) has a gematric value of 470, like the word עת (= time). When we subtract 470 from 1005 we get 535, the gematric value of קהלת (qoph-he-lamedh-tau = the Preacher). Here is the subtext. After Solomon destroyed his thousand and five tainted songs, he wrote the book of Ecclesiastes, which contains only one obvious piece of music: the 'time-for-everything' עת-song of chapter 3, verses 1 to 8. Ecclesiastes 3. 1 has a total gematric value of 2114, and so does the five-word musical title שגיון לשלמה אשר שר בשאול. You'll be able to translate that title if you look up Psalm 7. 1, Psalm 127. 1, and Amos 9. 2 in Hebrew. (Was the repetitious infantile text of the עת-song, which reminds us of I Corinthians 13. 11a, inspired by the ticking of a hellish chronometer?) The song's melody is encoded in the first letters of consecutive words, and its ten-note wandering bass-line is encoded in the first three words of verse 1 (לכל זמן ועת: note that the kaph of לכל is a double letter.)

Solomon destroyed more than his thousand and five songs. Read I Kings 4. 33. *And he spake of trees, FROM the cedar tree that is in Lebanon EVEN UNTO the hyssop that springeth OUT OF the wall: he spake also of beasts, and of fowl, and of creeping things, and of fishes.* (The monoecious juniper of I Kings 19 – רתם אחת in verse 4, and רתם אחד in verse 5 – may represent a vestige of Solomonic botany.) Don't construe I Kings 4. 33 as a commendation, and don't think of literary survival in accidental terms. The Holy Spirit of God, who led the Preacher to record a horrendous confession, made sure that Solomon's botanical and zoological works would not survive -- most likely by leading

their contrite author to destroy them. Why so? Perhaps because in those works Solomon had articulated a doctrine of evolution. Notice the DESCENT which appears in I Kings 4. 33. In first place we have a lofty form of vegetable life (cedar). In second place we have a lowly form of vegetable life (hyssop). In third place we have a mineral wall of stone or brick. Solomon may have come to imagine that lowly vegetable life-forms had their origins in the mineral creation. You remember how Poe describes a particular notion of Roderick Usher.

This opinion, in its general form, was that of the sentience of all vegetable things. But, in his disordered fancy, the idea had assumed a more daring character, and trespassed, under certain conditions, upon the kingdom of inorganization [= the mineral kingdom].....The belief, however, was connected (as I have previously hinted) with the gray stones of the home of his forefathers.....the many fungi which overspread them.....

Poe also tells us that

*.....there were passages in Pomponius Mela, about the old African Satyrs and Aegipans, over which Usher would sit dreaming for hours. [I'll clarify Poe's reference by quoting and translating three such passages from *De Chorographia*.]*

I. 20.vix iam homines magisque semiferi Aegipanes et Blemyes et Gamphasantes et Satyri.....

.....indeed barely human, more like half-beasts: Aegipans, Blemyes, Gamphasantes, and Satyrs.....

I. 40. Satyris praeter effigiem nihil humani. Aegipanum quae celebratur ea forma est.

There is nothing human about the Satyrs apart from their physical form. The Aegipans look like the mythical creatures which bear their name.

III. 83.unde visuntur patentes magis campi quam ut perspici possint [Aegi]panum Satyrorumque. Hinc opinio causae fidem cepit, quod cum in his nihil culti sit, nullae habitantium sedes, nulla vestigia, solitudo in diem vasta et silentium vastius, nocte crebri ignes micant et veluti castra late iacentia ostenduntur, crepant cymbala et tympana, audiunturque tibiae sonantes maius humanis.

From here one can survey the plains of the Aegipans and the Satyrs, which stretch further than the eye can see. Popular beliefs about these creatures are based upon the following facts. Their plains contain no cultivated fields, no dwellings for people to live in, and no beaten tracks. During the day one is aware only of a profound solitude, and of a silence that is even more profound. Night tells a different tale. Gleams of firelight appear in noticeable clusters, so that one has the impression of great sprawling camps. Cymbals and drums assail the ear. Reed-pipes can also be heard. These pipes sound much louder than the ones that humans play.

Did Solomon think evolutionary thoughts as he studied the many APES and MONKEYS (not peacocks) which his navy imported? We find the two Hebrew words that mean 'and apes and monkeys' spelled וקפים ותכיים in I Kings 10. 22, but spelled וקופים ותוכיים in II Chronicles 9. 21. The Chronicler's two extra waus increase the gravity of his language. Whereas in 400 gematria the phrase וקפים ותכיים in I Kings 10. 22 adds up to 722, which is equivalent to 375 שלמה (= Solomon) plus 347 משבה (= backsliding), the phrase וקופים ותוכיים in II Chronicles 9. 21 adds up to 734, which is equivalent to 375 שלמה (= Solomon) plus 359 שטן (= Satan). If Solomon was teaching evolution, he was working for Satan.

I once delivered a sermon in French to an African congregation. We all sang heartily for half an hour before I began to preach. Our singing was accompanied by an enormous pentatonic xylophone, and by two drums -- Pomponius Mela would have called them *tympana* -- made from hollowed-out tree-trunks. For no exquisite reason the thought of those instruments leads me to recall two dreadful passages from Charles Darwin's *The Descent of Man*, one of which I quoted in chapter 1.

We see that the musical faculties, which are not wholly deficient in any race, are capable of prompt and high development, for Hottentots and Negroes have become excellent musicians, although in their native countries they rarely practise anything that we should consider music. Schweinfurth, however, was pleased with some of the simple melodies which he heard in the interior of Africa. [Oh, well done, boys and girls! The mighty Schweinfurth was *pleased*.]

At some future period, not very distant as measured by centuries, the civilised races of man will almost certainly exterminate, and replace, the savage races throughout the world. At the same time the anthropomorphous apes, as Professor Schaaffhausen has remarked, will no doubt be exterminated. The break between man and his nearest allies will then be wider, for it will intervene between man in a more civilised state, as we may hope, even than the Caucasian, and some ape as low as a baboon, instead of as now between the Negro or Australian and the gorilla.

Darwin's words have stoked 'the furnace of iron' to which Solomon alluded in I Kings 8. 51. Once the Bible becomes what Poe called 'the manual of a forgotten church', Lytton Strachey can play Solomon, and Ernst Röhm can play Joab. Dark music comes out of the fallen nature when God is not acknowledged as Creator. Poe has heard that music.

Although, as boys, we had been even intimate associates, yet I really knew little of my friend.

We painted and read together; or I listened, as if in a dream, to the wild improvisations of his speaking guitar. And thus, as a closer and still closer intimacy admitted me more unreservedly into the recesses of his spirit, the more bitterly did I perceive the futility of all attempt at cheering a mind from which darkness, as if an inherent positive quality, poured forth upon all objects of the moral and physical universe, in one unceasing radiation of gloom. [Poe's phrase *more bitterly* may be rooted in Ecclesiastes 7. 26 (AV).]

I shall ever bear about me a memory of the many solemn hours I thus spent alone with the master of the House of Usher. Yet I should fail in any attempt to convey an idea of the exact character of the studies, or of the occupations, in which he involved me, or led me the way.

I reckon that Roderick Usher was thinking evolutionary thoughts when he brooded over stones, and fungi, and certain passages of Pomponius Mela.

Have you found the last five pages very hard to read? Then let me conclude. Edgar Allan Poe died at the age of forty. His final words were, 'Lord, help my poor soul.' In Acts 2. 21 we read that *whosoever shall call upon the name of the Lord shall be saved*, so Poe must have been saved. Any repentant sinner can be saved. Solomon repented, and was saved. After his conversion he wrote Ecclesiastes. He wrote Psalm 127. Then he wrote such a genial book about love and resurrection as no other man could have written. That book bears the title שיר השירים אשר לשלמה (= The song of songs, which is Solomon's). In 400 gematria the title's second word השירים has a value of 565, like the

word לקהלת (= of the Preacher). The two words שיר השירים may therefore be understood to mean *The Song of the Preacher*. That's enough about Solomon for the present. Asenath and her mother are waiting to be examined through the lens of 22 gematria.

Read Genesis 41. 45-46 in the American Standard Bible.

45. And Pharaoh called Joseph's name Zaphenath-paaneah; and he gave him to wife Asenath, the daughter of Poti-phaera priest of On. And Joseph went out over the land of Egypt. 46. And Joseph was thirty years old when he stood before Pharaoh king of Egypt. And Joseph went out from the presence of Pharaoh, and went throughout all the land of Egypt.

Two people get new names. Joseph becomes Zaphnath-paaneah, and Potiphar becomes Poti-phaera. A Hebrew might construe the name פוטי פרע (Poti-phaera) as 'afflicted by Pharaoh': compare the name פוטיאל (Putiel = afflicted by God) in Exodus 6. 25. Pharaoh is bound to ask Joseph why he has been imprisoned. Joseph either answers Pharaoh's question, or leaves Potiphar to answer it. Potiphar is not punished capitally. It is accepted that he had to behave as if he believed his wife rather than a servant. Pharaoh gives Joseph the wife for whom he asks, and also punishes his false accuser. Now Asenath is the daughter of Mr and Mrs Potiphar. The phrase בת פוטי פרע (= daughter of Poti-phaera) adds up to 119, and so does the phrase בת אחות פרעה (= daughter of Pharaoh's sister). Does verse 46, taken together with the closing words of verse 45, involve a clumsy repetition? No! For verse 45 encodes more than one fact. The last three words of verse 45, על ארץ מצרים, add up to 141, which is the value of תלה את אשת אדניו (= He hanged [object marker: see Genesis 40. 22] his master's wife: that is, Pharaoh hanged the wife of Joseph's former master). Mrs Potiphar is a sister of Pharaoh. The matter of her execution is discreetly encoded in a court document which records the wedding of Joseph and Pharaoh's niece. A writer of fiction would not need to display such discretion. Read chapters 39 to 41 of Genesis carefully when you have time, and ask yourself if what I have said makes sense.

The fact that Pontius Pilate became a Christian would need to be handled discreetly during his own lifetime. In Greek mythology NEREUS is the father of PONTUS. Pilate may be the NEREUS whom St Paul mentions in Romans 16. 15. In 800 Greek gematria, PONTIUS PILATE (Ποντιος Πειλατος) adds up to 1476.

pi-omicron-nu-tau-iota-omicron-sigma pi-epsilon-iota-lambda-alpha-tau-omicron-sigma
 $[80 + 70 + 50 + 300 + 10 + 70 + 200] + [80 + 5 + 10 + 30 + 1 + 300 + 70 + 200] = 1476$

In 800 Greek gematria, the accusative form of NEREUS which Paul uses in Romans 16. 15 (Νηρεα: nu-eta-rho-epsilon-alpha) adds up to 164. Watch.

$50 + 8 + 100 + 5 + 1 = 164$, and $780 (\text{Ποντιος}) - 696 (\text{Πειλατος}) = 2 + 82$, and $2 \times 82 = 164$

Now, bearing in mind that the digital root of 1476 is nine, and that the mythical Nereus was a shape-changer like Proteus, look at the equations which follow.

$$1476 / 9 = 164 \qquad 1476 + 164 = 1640 \qquad 14 \times 76 = 1064$$

Here is how Romans 16. 15 reads in the AV.

Salute Philologus, and Julia, Nereus, and his sister, and Olympas, and all the saints which are with them.

If Nereus is Pontius Pilate, Julia may be his wife, who is presumed to have become a Christian before her husband. The three Greek words from Matthew 27. 19 which are rendered 'his wife' (ἡ γυνὴ αὐτοῦ) are spelled eta gamma-epsilon-nu-eta alpha-epsilon-tau-omicron-epsilon. These three words add up in 24 gematria as follows.

$$7 + [3 + 20 + 13 + 7] + [1 + 20 + 19 + 15 + 20] = 125$$

The nominative-case name of JULIA (Ιουλιᾶ) is spelled iota-omicron-epsilon-lambda-iota-alpha, and it adds up in 800 gematria as follows.

$$10 + 70 + 400 + 30 + 10 + 1 = 521$$

125 is the reversal of 521. Although tradition has given Pilate's wife the name of *Claudia*, I reckon that she was really called JULIA. In 29 AD Pontius Pilate issued a coin on which the name of the Empress Julia appeared after a lapse of several years. It is possible that the Roman governor intended an oblique honour to his own wife. (Compare the coin of Aristobulus and Salome from c. 54 AD.) Let me show you a specimen of the Pilate coin from my collection. See if you can make out the first six upper-case letters of the Greek inscription that appears on one side. Use a magnifying glass, and start reading at a little below nine o'clock.

I O Υ Λ Ι Α



Now go back for a moment to the text of Romans 16. 15. You remember how important was the absence of a conjunction between the names of Zechariah and Ben, as also between the names of Unni and Eliab, in I Chronicles 15. 18.

Zechariah, Ben, AND Jaaziel, AND Shemiramoth, AND Jehiel, AND Unni, Eliab, AND Benaiah.....

The notable absence of a conjunction between JULIA and NEREUS in Romans 16. 15 inclines me to believe that Julia and Nereus were conjoined in matrimony.

Salute Philologus, AND Julia, Nereus, AND his sister, AND Olympas, AND all the saints which are with them.

St Paul wrote the Epistle to the Romans. He also wrote the Epistle to the Hebrews. Look at the first four Greek words of Hebrews 1. 1. I'll rearrange the AV's rendering of the verse so as to follow the order of the Greek words.

ΠΟΛΥΜΕΡΩΣ και ΠΟΛΥΤΡΟΠΩΣ παλαι

At-sundry-times and in-divers-manners in-time-past

ο θεος λαλησας τοις πατρασιν εν τοις προφηταις

God who spake unto-the fathers by the prophets.....

PAUL in Greek is Παυλος (Paulos). The first word πολυμερως contains every letter of Paul's Greek name except alpha, and so does the third word πολυτροπως. We find the two 'missing' alphas in the fourth word παλαι, which contains only two consonants, P and L. Notice that in both the first word and the third word the initial consonant is P, the second consonant is L, and the final consonant is S, as with the name Παυλος.

REAL LITERATURE IS NEVER CREATED IN A VACUUM

We can learn a great deal from Prof. Dennis R Macdonald's book *The Homeric Epics and the Gospel of Mark* (Yale University Press: New Haven and London, 2000), as also from Prof. Jared Calaway's online essay '*Polutropos: Much-Turned Speech in the Odyssey and Hebrews*'. On page 522 we considered the possibility that *Enuma elish* is acknowledged sonically in Genesis 1. 1. Has a Hebrew poet incorporated in Psalm 104 elements of a hymn by Akhnaten? Does the mental furniture of Mark and Luke include Homer's *Odyssey*? Does our Lord, who describes himself as 'Jesus of Nazareth' in Acts 22. 8, allude to Aeschylus, *Agamemnon* 1624 in Acts 26. 14? And is *Odyssey* I. 1-2 acknowledged sonically in Hebrews 1. 1?

Ἄνδρα μοι ἔννεπε, μοῦσα, πολύτροπον, ὃς μάλα πολλὰ
πλάγχθη.....

(= Muse, tell me about the man of many devices who wandered many ways.....).

A Christian should gladly answer *Yes* to all four of these questions. Literate language, whether or not it is inspired, is never formed in a cultureless vacuum. Consider three passages from the Old Testament. Here is Isaiah 51. 9 (AV). *Awake, awake, put on strength, O arm of the LORD; awake, as in the ancient days, in the generations of old. Art thou not it that hath cut Rahab, and wounded the dragon?* Here is Psalm 89. 10a (AV). *Thou hast broken Rahab in pieces, as one that is slain.* Here is Isaiah 30. 7 (New English Bible). *Vain and worthless is the help of Egypt; therefore I have given her this name, Rahab Quelled.* (The *Rahab* in each passage is the resh-he-beth dragon, not the resh-cheth-beth lady from Jericho.) Greta has found a double dragon in the Hebrew text of Genesis 1. 2! Read forward starting on the fourth letter, and leave 4-letter gaps. Then read backward starting on the thirteenth letter from the end, and leave 12-letter gaps. 'Little Rahab' involves letters 4, 9, and 14, while 'Big Rahab' involves letters 40, 27, and 14. Notice that $[4 + 9 + 14] = 3^3$, and $[40 + 27 + 14] = 3^4$.

והארץ היתה תהו ובהו וחשך על פני תהום ורוח אלהים מרחפת על פני המים

The exponential extensibility of Rahab the dragon is a scientific fact about which Moses, Ethan, and Isaiah may have learned something from their predecessors.

Literate authors take up and use the good, true, or beautiful things that they inherit. So do makers of musical instruments. In *Early Music* II. 3 (July, 1974), 168, Christopher Page wrote, 'It is to be hoped that the "Cremonese" school of medieval fiddle making is doomed.' Mary Remnant sagaciously reminded her readers in *Early Music* III. 1 (January, 1975), 47, 'that the Cremonese school of *violin* making did not spring up overnight, but was founded on very ancient traditions, some of them certainly going back to the Middle Ages.'

The first word of Hebrews 1. 1 is πολυμερως (pi-omicron-lambda-upsilon-mu-epsilon-rho-omega-sigma), which has an 800 gematric value of 1725. Παυλος (pi-alpha-upsilon-lambda-omicron-sigma) has an 800 gematric value of 781. Is there a link between these two facts? Perhaps.

$$1725 \text{ interpreted as } [172 \times 5] = [781 + (78 + 1)]$$

If the epistle had begun with an explicit greeting from St Paul, would his Hebrew addressees have been unwilling to read any further? I don't know. It may be that Paul preferred to validate himself by employing a system of referential devices (*one in a certain place, in another place, on this wise*) with which his Hebrew readers were already familiar. We've already observed how St John uses one of these referential devices in verse 5 of his second epistle (*from the beginning*). That epistle provokes several questions.

Look at the first five verses.

The elder unto the elect lady and her children, whom I love in the truth; and not I only, but also all they that have known the truth;

For the truth's sake, which dwelleth in us, and shall be with us for ever.

Grace be with you, mercy, and peace, from God the Father, and from the Lord Jesus Christ, the Son of the Father, in truth and love.

I rejoiced greatly that I found of thy children walking in truth, as we have received a commandment from the Father.

And now I beseech thee, lady, not as though I wrote a new commandment unto thee, but that which we had from the beginning, that we love one another.

John's use of coded language speaks not of diplomacy, but of DANGER. The author cannot name himself. He cannot name his addressee, who is a person of high standing. Having met some of the lady's children, the author can neither name those children, nor say how many of them he has met. (Silence can be eloquent at times. It is possible that the lady's husband is presently unsympathetic to her Christian faith.)

Let us refuse to turn St John's words into pious absurdities. The 'elect lady' is not a church, and she is not loved by all her contemporaneous fellow-Christians.

The elder unto the elect lady and her children, whom I love in the truth; and not I only, but also all they that have known the truth.....

What people love the elect lady? All those who have come to know the truth of the Christian gospel? No. Many of those who have come to know *that* truth have never heard of the elect lady, so it is impossible for them to love her. When St John says 'all they that have known the truth', he means 'all those who know the truth ABOUT YOU'.

Truth may be obscured by a foolish presumption. Read Judges 9. 53 in the American Standard Version.

And a certain woman cast an upper millstone upon Abimelech's head, and brake his skull.

Some readers of these words presume that the 'certain woman' was a dignified middle-aged lady, that she happened to be carrying an upper millstone at the time, and that she scored a lucky hit when she dropped the upper millstone on Abimelech's unhelmeted head in bright daylight.

Here is a more credible reading.

The woman was young, strong, vigorous, and skilful. She had picked up the millstone with the intention of using it as a missile. Of course she was assisted by gravity, but she took careful aim, and may have exposed herself to the enemy while doing so. She *must* have exposed herself to the enemy after casting the millstone, because she caused Abimelech to know that his destroyer was female. I reckon that the 'certain woman' did her heroic deed in crepuscular light, and I can't believe that Abimelech was wearing no head-protection at the time.

The 'certain woman' was an athletic Penthesilea. How should you imagine her? Well, don't think of the nice old lady who chairs the Flower Arrangement Committee in your local church. Think of Katie Taylor, the Irish boxing champion, or think of Leryn Franco, the Paraguayan javelin champion. Then go and read Genesis 3. 15. There is more to any Bible story than the event.

Foolish presumptions abound. On the basis of NO EVIDENCE WHATEVER, many people imagine that the 'elect lady' of Il John looked something like Ulster's most famous female novelist, Mrs Amanda McKittrick Ros.



And on the basis of NO EVIDENCE WHATEVER, many people imagine that Herod's stepdaughter Salome performed a lewd dance as an adult woman.

There may be two bearers of the name Salome in the New Testament.

Salome 1 is presumed by some scholars to be the wife of Zebedee (read Matthew 27. 56 in parallel with Mark 15. 40).

Salome 2 is the stepdaughter of Herod. (We learn her name from Josephus, *Jewish Antiquities* 18. 5. 4.)

In Mark 15. 40 the two Maries AND SALOME watch the death of the Lord Jesus from a distance. In Mark 15. 47 only the two Maries watch the burial of the Lord's body. In Mark 16. 1 the two Maries AND SALOME bring spices to the Lord's tomb. Mark may be using the two Maries so as to hint at the fact of two Salomes. And in 15. 47 he may even be telling us obliquely that a person called Salome had to leave before the burial of the Lord's body took place.

On the day when John the Baptist was murdered, Herod's stepdaughter Salome was only a child. Matthew and Mark call her κορσσιον, USING THE GREEK WORD WHICH THEY BOTH APPLY TO THE TWELVE-YEAR-OLD DAUGHTER OF JAIRUS. Salome may have been fifteen or sixteen when she danced at her stepfather's birthday party. Neither Evangelist attaches any blame to Salome.

We must lay to rest the vulgar notion that Salome was a mature young woman who pleased her stepfather and his guests by dancing lewdly. If that notion owes a good deal to Oscar Wilde, Gustave Moreau, and Richard Strauss, it owes nothing at all to the New Testament writers. Salome herself was as innocent as the dancing daughter of Jephthah. Some authors, adducing a mere handful of literary references, are happy to assert that *all dancing girls in the ancient world danced lewdly*. Ignore these foolish authors. And ignore any dark-souled puritan who equates a perfectly chaste ballet like *Nutcracker* with the sort of dancing that goes on in an unsalubrious nightclub. The κορσσιον Salome PLEASED Herod and his guests (Matthew 14. 6: ηρεσεν; Mark 6. 22: ηρεσεν). What made it possible for her to do so? *The fact that those who watched her performance were connoisseurs of dance.*

Ignorance or puritanical disapproval of dance has led more than a few commentators to construe the Greek verb ηρεσεν in an unclean manner. These commentators, as Lady Bracknell would say, should be well punished for their morbidity. Here are four important words from *Hamlet*.

Taint not thy mind....

Here are ten important words from Isaiah 52. 11.

.....be ye clean, that bear the vessels of the LORD.

If you want to study the Bible properly, you must bring a healthy mind to the job. Do you remember how the saying of the twelve in Acts 6. 5 'PLEASED the whole multitude'? The verb once again is ηρεσεν, and it doesn't suggest that every member of the multitude was leering in lubricious delight. Listen! In Beirut as in Bayreuth, a lady dancer may be watched 'with unleering eyes' by an audience consisting of male and female connoisseurs. I shouldn't have to state that fact, but if you didn't know it, LEARN IT NOW. Here are four words. *The young girl danced.* Only a dirty-minded brute will want to interpret those four words as follows. *The young girl danced in a lewd manner.* Strange things go on in some very religious minds. One well-known commentator, whose work you can find on the web, talks about 'the licentious dance of the half-naked princess'!

John the Baptist was a victim of the scheming Herodias. So was young Salome. After delivering the head of the murdered prophet to her mother, Salome must have been greatly distressed. Joanna, the wife of Herod's steward Chuza, was a follower of the Lord Jesus (Luke 8. 3), and she may have been at hand to comfort the innocent teenager. I believe that in time Salome became a secret disciple of the Lord Jesus, that she witnessed the Crucifixion, that she brought spices to the Lord's tomb on Sunday morning, and that she is the 'elect lady' of II John. The tale of Salome deserves to be told in a long article, if not in a book. For the present, I'll ask you to engage in a few pieces of counting.

εκλεκτη (ELECT) = epsilon-kappa-lambda-epsilon-kappa-tau-eta

800 gematria: 5 + 20 + 30 + 5 + 20 + 300 + 8 = 388

Σαλωμη (SALOME) = sigma-alpha-lambda-omega-mu-eta

800 gematria: 200 + 1 + 30 + 800 + 40 + 8 = 1079

1079 = [13 x 83], and [1383 – 1079] = [38 x 8]

Let me remind you that in 24 gematria Σαλωμη (SALOME) adds up to 73. Now read II John from the seventeenth word of verse 1 to the tenth word of verse 2. Starting on the last letter of μονος, read the first three letters of Salome's name forward. Count SEVENTY-THREE letters forward, and you will land on an omega. Starting on this omega, read the last three letters of Salome's name backward.

μονος αλλα και παντες οι
εγνωκοτες την αληθειαν δια
την αληθειαν την μενουσαν
εν ημιν και μεθ ημων

‘Hold on a moment,’ says Lettuce Girl. ‘Even in bright sunlight, that divided name is rather hard to read.’

As it stands, for someone new to the game, so it is. But if St John wrote his epistle gridwise, Salome may have been able to read her name more easily. Here are the first 152 letters of II John, with tiny underwritten iotas omitted.

οπρεσβυτεροσεκλεκτη
κυριακαιτοιςτεκνοις
αυτησουςεγωαγαπωενα
ληθειακαιουκεγωμονο
σαλλακαιπαντεςοιενν
ωκοτεςτηναληθειανδι
ατηναληθειαντηνμενο
υσανενημινκαιμεθημω

Of course there’s more. The three words which enfold Salome’s name contain altogether thirteen letters, of which seven are not used. These thirteen letters (mu-omicron-nu-omicron-sigma alpha-lambda-lambda-alpha eta-mu-omega-nu) add up in 800 gematria to 1390.

μ ο ν ο ς α λ λ α η μ ω ν

$$[40 + 70 + 50 + 70 + 200] + [1 + 30 + 30 + 1] + [8 + 40 + 800 + 50] = 1390$$

When from the total 1390 we subtract SEVEN (the number of the unused letters), we get 1383.

1383 interpreted as 13 x 83 = 1079 (SALOME)

Σαλωμη (SALOME) in the accusative case is Σαλωμην (SALOMEN: sigma-alpha-lambda-omega-mu-eta-nu). In verse 12 of his letter St John uses the genitive-case word μελανος (MELANOS = ink: mu-epsilon-lambda-alpha-nu-omicron-sigma). Eta is merely a long form of epsilon, and omega is merely a long form of omicron, so in II John 12, as in III John 13, MELANOS may be a near-anagram of SALOMEN. (The language in each of these verses is bizarre. Without paper or pen and ink, John will be unable to write *any* things, let alone *many* things.)

πολλα εχων υμιν γραφειν ουκ ηβουληθην δια χαρτου και μελανος.....

(= Having many things to write unto you, I would not write with paper and ink).

Only an ignorant person will protest that the use of anagram is bound to be frivolous. While it was enormous fun to be a member of the early church, it was also very dangerous. In every age real cryptography has been a necessity, and not a mere amusement. Even today there are areas of literary life in which the use of cryptograms is a serious business.

TWO LETTERS OF NOTABLE IMPORTANCE

On 1 November 1956 the Hungarian Prime Minister Imre Nagy announced that his country was withdrawing from the Warsaw Pact. Three days later the Soviet Union invaded Hungary. Imre Nagy was 'executed' in June 1958 and buried in Plot 301 of the New Municipal Cemetery outside Budapest. On 16 June 1989 over 300,000 people attended the funeral and reburial of Imre Nagy.

Numbers can take on particular colours. While Ray Overholt's hymnic phrase 'a million voices' is merrily sung by American Christians, the Russian word *миллионноголосое* (= million-voiced), which once appeared in a poem about Nikolai Yezhov, evokes the Poisoned Dwarf in his homeland even today. And even today, more than fifty years after the murder of Imre Nagy, many Hungarians perceive the number 301 as having a tremendous sacral gravity.

In 1984 the Hungarian writer Gáspár Nagy courageously published a short poem whose three final lines each ended with an infinitive. 'What is courageous about that?' you ask. Well, the Hungarian infinitive ends in *-NI*, and therefore with the initials of IMRE NAGY (no relation of the poet). Don't imagine that the two initials *NI* have to be read backward. We say 'Imre Nagy' and 'Franz Liszt', but Hungarians say 'Nagy, Imre' and 'Liszt, Ferenc', exactly as the Slovene poet France Prešeren says 'Primicovi Julji' (see page 212).

egyszer majd el kell temetni (= one day he will have to be buried
és nekünk nem szabad feledni and we must not forget
a gyilkosokat néven nevezni to name his murderers by name).

Several historians believe that the order to murder Imre Nagy was given by Nikita Khrushchev, Premier of the Soviet Union, *pour décourager les autres*.

One more sentence. Although they made it past the censor, Gáspár Nagy's three infinitives were pounced on by the Thought Police, and the poet was dismissed from his secretaryship of the Hungarian Writers' Union.

Of course it is possible to be *too* serious. Let us take care not to misconstrue those pieces of Biblical language which rise above the serious absoluteness of theology. I'll give you two examples from the gospels of what I mean.

Here's the first one. Our Lord is not speaking like a solemn theologian when he says to his listeners (Matthew 7. 11):

*If ye then, being evil, know how to give good gifts unto your children,
how much more shall your Father which is in heaven give good things
to them that ask him?*

Evil here means 'flawed', or 'unsound'. The Lord Jesus is not saying that his listeners are 100% wicked. (If they were, they wouldn't WANT to perform good actions.) The Lord's listeners have all been mortally damaged by the Fall. All of them have sinned, and come short of the glory of God. In their flesh *dwelleth permanently* no good thing. They need to be saved by the blood of Christ. Until they repent of their sins they are subject to the power of darkness. And yet they are not so comprehensively 'evil' as the Jewish theologians allege (John 7. 49).

But this people who knoweth not the law are cursed.

The Lord's listeners in Matthew 7 can see his face, and hear the tone of his voice. They don't take offence. They actually prefer the Lord's wholegrain bread to the weak and watery gruel of the theologians. (What persons are closer to being comprehensively evil? Those who hate the Lord Jesus Christ. Those who want to murder him. Those who will mock him as he suffers. The theologians.)

For a second example, look at Mark 7. 27.

Let the children first be filled: for it is not meet to take the children's bread, and to cast it unto the dogs (κυνάρια = little dogs, or puppies).

Here the Lord Jesus is addressing a Gentile woman who has asked him to cast a devil out of her daughter. His word 'dogs' may look harsh on the page, but it doesn't sound harsh when he says it. **THE LORD JESUS IS BEING HUMOROUS.** Not every scholar is aware of the fact! Matthew Henry takes the little dogs to be

"..... those who are not of God's family, and who have not that knowledge of him, and interest in him, which they [= the Israelites] have, and who are as *dogs in comparison of them*, vile and profane, and who are as *dogs to them*, snarling at them, spiteful toward them, and ready to worry them."

Even in the secular world, grave-minded scholars can turn humorous language into pompous moralistic fatuity without trying. Callimachus once came out with the four-word dictum Μεγα βιβλιον, μεγα κακον. For centuries that dictum has been represented in English by a frightful piece of nonsense: 'A great book is a great evil'. Callimachus really meant to say, 'A big book is a big nuisance.'

Mind you, some 'great books' *are* evil. An intelligent student may be genuinely bored when he first reads the works of Franz Kafka, James Joyce, and Samuel Beckett. Then a demon whispers in his ear. *You mustn't be bored. These men are Very Great Writers. All the clever people say so.* The student who embarks upon a life of untruth after listening to that demon becomes blind to health and reality. He may come to embrace both a mad earnestness and a lunatic scale of values. He may even lose both his sense of humour and his sense of proportion.

APPLE-CORES, EGGSHELLS, AND USED TEABAGS

(OR, THE POMP AND CIRCUMSTANCE OF A TERMITE COLONY)

On 7 July 1866 the exalted station of Queen Victoria's Scottish servant John Brown was satirized in *Punch* as follows.

Court Circular.

Balmoral, Tuesday.

MR. JOHN BROWN walked on the Slopes. He subsequently partook of a haggis.

In the evening MR. JOHN BROWN was pleased to listen to a bag-pipe.

Georg Fohrer's *Einleitung in das Alte Testament* (Heidelberg, 1965) was translated into English by David Green as *Introduction to the Old Testament* (London, 1970). On page 25 of the English version, Fohrer solemnly records the most ludicrous trivialities of scholarly practice.

As far as we know, the term "introduction" was first used by Adrianus, a monk (d. ca. 440), in his work *eisagōgē eis tās theías graphás*, *Introduction to the Divine Scriptures*. This was latinized as *isagoge* and *introductio* and translated into German as *Einleitung* by J. D. Michaelis in 1750. English borrowed the Latin term directly.

Antonio López de Santa Anna had his amputated leg buried with full military honours. Charles Gounod composed *The Funeral March of a Marionette*. Self-important academe demands the apotheosis of garbage. 1866 was the year in which John Brown partook of a haggis and listened to a bagpipe. That was a joke. 1750 was the year in which J D Michaelis translated some Latin word into German as *Einleitung*. That was serious.

And now, without partaking of a haggis, we shall enjoy afternoon tea of a unique species. Lettuce Girl has produced twelve ravishing sweetmeats of her own invention. (Jane is happy for me to divulgate an imprecise male notion of the recipe: fresh raspberries and fresh coconut, chopped not too finely and blended together by some kind of machine, cooled for a while in the freezer, moulded into bars, thinly covered with dark chocolate, and kept in the fridge.) By what name should these delectable confections be known? You can decide. Lettuce Boy calls them *Rascobars*, but the inventress, who inclines towards probabilism, calls them *Escobars*. (Must say I'm pretty keen on probabilism myself. Not so sure about Heisenstein's Uncertainty Principle, mind you.)

'Stop there for a minute,' says Lettuce Girl. 'The veneration of trash isn't a special vice of the academic world. Rubbish is venerated in today's *musical* world.' She pauses. 'I'm not talking about modern church music, although much of that is utterly frightful. I'm talking about the eighteenth century.' Jane takes a sip of tea. 'Here's what I mean. Some of the composers who came after Bach brought about the *cultural revolution* of European music. They smashed everything. They immersed themselves in tonic-and-dominant silliness. They sucked like teething babies on the jujube of the dominant seventh. And like dull-minded carpenters who drill one-inch holes in the sides of their bookcases, they riddled their melodies with fatuous rests.' Lettuce Girl inhales slowly. 'After making up a language of effeminate gestures, they threatened the world with death by minuet. Instead of building castles of stone, they built houses of cards. In fact, they replaced the pillared strength of the baroque with boneless baubles and bubbles. They fuddled their brains with the pink lemonade of two-chord harmony. Then they minced about like shampooed poodles on the catwalks of inconsequence.' Jane takes another sip of tea. 'In time these composers grew up. Yet today, some of their most vacuous works are highly esteemed. Why?'

That is a useful question. If your perceptive faculty is impaired by the vulgar Olympian notion of Great Composers, you may misconstrue a triviality like *Eine kleine Nachtmusik*. Likewise, if your perceptive faculty is impaired by an excess of soberness, you may misconstrue a piece of language that was never intended to be solemn. Let me give you an example of misconstruction from the world of Biblical studies. After reading the opening verses of II and III John together with a fragment of Papias, some scholars have created a truly marvellous character, more venerable than the Bede, and distinct from the Evangelist. They call this imaginary creature 'John the Elder'. NO SUCH PERSON EVER EXISTED. I mean to say, an elder in the early church exercised his presbyteral authority only over the congregation to which he himself belonged. (The apostle Peter was an elder *in his local church*.) II John 1 should be understood as beginning, 'Older man to elect lady'. We already know that 'Elect Lady' is a codename. We need to realize that the Greek word rendered 'elder' in II and III John (πρεσβυτερος) is also a codename. The word in question is spelled pi-rho-epsilon-sigma-beta-upsilon-tau-epsilon-rho-omicron-sigma, and it has an 800 gematric value of 1462. Remembering the 800 gematric value of JOHN in Greek (iota-omega-alpha-nu-nu-eta-sigma = 1119), we take three arithmetical steps to decode OLDER MAN.

Interpret 1462 as $146 / 2 = 73$. Interpret 73 as $7^3 = 343$.

Subtract 343 from 1462, and you get 1119 (= JOHN).

HOW MOSES SIGNED EACH BOOK OF THE PENTATEUCH

Although he didn't write certain pieces of text like Genesis 36. 31b, Numbers 12. 3, and Deuteronomy 34. 5-12, Moses is the author of the Pentateuch as much as Musorgski is the composer of *Khovanshchina*.

In Hebrew the name of MOSES is spelled **מֹשֶׁה** (mem-shin-he).

Here is Genesis 1. 1.

בראשית ברא אלהים את השמים ואת הארץ

In 400 gematria **מֹשֶׁה** adds up to 345. Moses knew that the 400 gematric value of his own name encapsulated the first Pythagorean triple.

$$3^2 + 4^2 = 5^2 \qquad 9 + 16 = 25$$

The name of Moses, spelled backward, is flanked on the left by NINE letters (3^2), flanked on the right by SIXTEEN letters (4^2), and therefore flanked by a total of TWENTY-FIVE letters (5^2). Moses has signed his name *mathematically*.

Here is Exodus 1. 1.

ואלה שמות בני ישראל הבאים מצרימה את יעקב איש וביתו באו

In 406 gematria **מֹשֶׁה** adds up to 456. The name of Moses is spelled backward in the FOURTH, FIFTH, and SIXTH letters of Exodus 1. 1. Of course there's more. Since Exodus is the SECOND book of Moses, the author's name is spelled backward so as to begin on the SECOND letter of the SECOND word.

Here is Leviticus 1. 1.

ויקרא אל מֹשֶׁה וידבר יהוה אליו מאהל מועד לאמר

Leviticus is the THIRD book of Moses, so the author's name comes as its THIRD word.

Here is Numbers 1. 1.

וידבר יהוה אל מֹשֶׁה במדבר סיני באהל מועד באחד
לחדש השני בשנה השנית לצאתם מארץ מצרים לאמר

Numbers is the FOURTH book of Moses, so the author's name comes as its FOURTH word.

Here is Deuteronomy 1. 1.

אלה הדברים אשר דבר מֹשֶׁה אל כל ישראל בעבר הירדן
במדבר בערבה מול סוף בין פארן ובין תפל ולבן וחצרת ודי זהב

Deuteronomy is the FIFTH book of Moses, so the author's name comes as its FIFTH word.

Taken together, the third word of the third book, the fourth word of the fourth book, and the fifth word of the fifth book declare a double 3-4-5. Greta has noticed that the equidistant twenty-second, thirteenth (read *shin* for *sin*), and fourth letters of Exodus 1. 1 spell the name of Moses, which has a 22 gematric value of 39. The sum of 22, 13, and 4 is 39.

Let me relate a trivial anecdote. One winter night, more than twenty years ago, a sudden freeze covered every road in Belfast with an inch-thick layer of perfectly smooth ice on which it was impossible to drive. Public transport ceased to operate. I was able to attend an evening lecture in the university only because the one driver in Belfast who had chains on his wheels felt led to give me a lift.

When I entered the lecture-room, I found two scholars standing by a radiator.

‘That is a fearfully cold night,’ said Number One.

‘The sort of night on which your overcoat might be stolen,’ said Number Two.

All three of us laughed heartily. Why? Because we were all weirdoes? No! *Because we were all Slavists.* You see, Number Two had alluded to Gogol’s story ‘Шинель’ (= The Overcoat). Once you’ve studied that story diligently, you’re never the same again. Several readers know what I mean. The departing guest who asks for his *overcoat* transports you back to St Petersburg at once. Here is a law of Russian literature: *there is no escape from the power of Gogol.* You think of ‘Шинель’ even on the day when you discover that in modern Greek the word **ιματιον** (iota-mu-alpha-tau-iota-omicron-nu) means ‘overcoat’.

Soon afterwards you read the story of Bartimaeus (Mark 10. 46-52).

46 And they came to Jericho: and as he went out of Jericho with his disciples and a great number of people, blind Bartimaeus, the son of Timaeus, sat by the highway side begging. 47 And when he heard that it was Jesus of Nazareth, he began to cry out, and say, Jesus, thou Son of David, have mercy on me. 48 And many charged him that he should hold his peace: but he cried the more a great deal, Thou Son of David, have mercy on me. 49 And Jesus stood still, and commanded him to be called. And they call the blind man, saying unto him, Be of good comfort, rise; he calleth thee. 50 And he, casting away his garment, rose, and came to Jesus. 51 And Jesus answered and said unto him, What wilt thou that I should do unto thee? The blind man said unto him, Lord, that I might receive my sight. 52 And Jesus said unto him, Go thy way; thy faith hath made thee whole. And immediately he received his sight, and followed Jesus in the way.

You notice that although Bartimaeus is identified as THE SON OF TIMAEUS in verse 46, he isn’t named again. In verses 49 and 51 he is merely THE BLIND MAN. It is as if St Mark records the man’s name, and then throws it away.

Suddenly your attention is caught by verse 50.....

And he, casting away his garment, rose, and came to Jesus.

....so you look it up in Greek.

ο δε αποβαλων το **ΙΜΑΤΙΟΝ** αυτου αναστας ηλθεν προς τον Ιησουιν.

There it is again! The word **ιματιον** (iota-mu-alpha-tau-iota-omicron-nu).

Why does Mark bother to tell us that Bartimaeus threw away his overcoat, or outer garment? Hereby hangs a short but exciting tale.

Once upon a time there lived in Jericho a cosmopolitan Jewish rabbi who studied the works of Plato. He became very fond of Plato's dialogue *Timaeus*, in which the eponymous speaker has a good deal to say about SIGHT.

ὄψις δὴ κατὰ τὸν ἕμὸν λόγον αἰτία τῆς μεγίστης ὠφελείας γέγονεν ἡμῖν, ὅτι τῶν νῦν λόγων περὶ τοῦ παντὸς λεγομένων οὐδεὶς ἂν ποτε ἐρρήθη μήτε ἄστρα μήτε ἥλιον μήτε οὐρανὸν ἰδόντων. νῦν δ' ἡμέρα τε καὶ νύξ ὀφθεῖσαι μῆνές τε καὶ ἐνιαυτῶν περίοδοι καὶ ἰσημερίαί τε τροπαὶ μεμηχάνηται μὲν ἀριθμὸν, χρόνου δὲ ἔννοιαν περὶ τε τῆς τοῦ παντὸς φύσεως ζήτησιν ἔδοσαν· ἐξ ὧν ἐπορισάμεθα φιλοσοφίας γένος, οὗ μείζον ἀγαθὸν οὔτ' ἦλθεν οὔτε ἤξει ποτὲ τῷ θνητῷ γένει δωρηθὲν ἐκ θεῶν. λέγω δὴ τοῦτο ὀμμάτων μέγιστον ἀγαθόν· τὰλλα δὲ ὅσα ἐλάττω τί ἂν ὑμνοῖμεν, ὧν ὁ μὴ φιλόσοφος τυφλωθεὶς ὀδυρόμενος ἂν θρηνοῖ μάτην.....

Readers of my own vintage will want me to quote the rendering of Benjamin Jowett (1817-1893), who turned the dialogues of Plato into English classics.

The sight in my opinion is the source of the greatest benefit to us, for had we never seen the stars, and the sun, and the heaven, none of the words which we have spoken about the universe would ever have been uttered. But now the sight of day and night, and the months and the revolutions of the years, have created number, and have given us a conception of time, and the power of enquiring about the nature of the universe; and from this source we have derived philosophy, than which no greater good ever was or will be given by the gods to mortal man. This is the greatest boon of sight: and of the lesser benefits why should I speak? even the ordinary man if he were deprived of them would bewail his loss, but in vain.

Anyway! The rabbi that I'm talking about was such an admirer of Plato that he called his son 'Timaeus', exactly as an admirer of Charles Dickens might name his son 'Oliver' or 'Nicholas'. Timaeus grew up to be an urbane scholar like his father, and he was so pleased with his Platonic name that in due time he called his own son 'Bartimaeus'. (The prefixial BAR means 'son' in Aramaic, but it may be read backward as RAB, the honorific title of a scholar.) Father and grandfather hoped that the boy would become a third-generation Platonist. Their hopes came to nothing when the boy lost his sight, and the Platonism of Timaeus seems not to have helped, because when we meet the adult Bartimaeus he is begging in a street. Platonism has done nothing for Bartimaeus. His own name refers to the one piece of ancient literature which is most concerned with SIGHT, and yet he can't see! It makes perfect sense that when Bartimaeus comes to the Lord Jesus Christ, he throws Platonism away.

In Greek, accusative-case TIMAEUS is spelled tau-iota-mu-alpha-iota-omicron-nu.

Τ Ι Μ Α Ι Ο Ν

When you move the tau from first place to fourth place.....

Ι Μ Α Τ Ι Ο Ν

.....you get ιματιον (the 'garment' which Bartimaeus throws away).

Now you can see why St Mark bothers to tell us about the blind man's overcoat.

There are times when Biblical clothes bear a message. Think of Esther 8. 15.

And Mordecai went out from the presence of the king in royal apparel of blue and white, and with a great crown of gold, and with a garment of fine linen and purple: and the city of Shushan rejoiced and was glad.

Before we address the famous one-letter enigma of Esther 9. 29, let us confront an oft-repeated falsehood: that neither the book of Esther nor the Song of Solomon is quoted anywhere in the New Testament. Look at Esther 5. 3, 6; 7. 2.

Then said the king unto her, What wilt thou, queen Esther? and what is thy request? it shall be even given thee TO THE HALF OF THE KINGDOM.

And the king said unto Esther at the banquet of wine, What is thy petition? and it shall be granted thee: and what is thy request? even TO THE HALF OF THE KINGDOM it shall be performed.

And the king said again unto Esther on the second day at the banquet of wine, What is thy petition, queen Esther? and it shall be granted thee: and what is thy request? and it shall be performed, even TO THE HALF OF THE KINGDOM (εως ημισους της βασιλειας μου in the Septuagint).

Then look at Mark 6. 22-23.

And when the daughter of the said Herodias came in, and danced, and pleased Herod and them that sat with him, the king said unto the damsel, Ask of me whatsoever thou wilt, and I will give it thee. And he sware unto her, Whatsoever thou shalt ask of me, I will give it thee, UNTO THE HALF OF MY KINGDOM (εως ημισους της βασιλειας μου – EXACTLY as in the Septuagint).

Herod was a literate man. He knew the book of Esther intimately.

[Like Ahasuerus, Herod Antipas had set aside one wife and taken another. If you look up Esther 2. 9 in the Septuagint, you'll find that the queen-to-be is denoted by the noun κορασιον (= girl), and that she ηρεσεν (= pleased) Hegai. If you look up Matthew 14. 6, 11 and Mark 6. 22, 28 in Greek, you'll find that Salome is denoted by the noun κορασιον (= girl), and that she ηρεσεν (= pleased) Herod.]

The vengeful Herodias was a literate woman. She knew at least three verses from the Song of Solomon (6. 11, 6. 12, and 7. 1: AV, 6. 11-13).

I went down into the garden of nuts to see the fruits of the valley, and to see whether the vine flourished, and the pomegranates budded.

Or ever I was aware, my soul made me like the chariots of Amminadib.

Return, return, O Shulamite; return, return, that we may look upon thee. What will ye see in the Shulamite? As it were the company of two armies.

Let us try to read those three verses as Herodias might have read them.

I went to a party in the food-producing 'garden of Israel' (= Galilee).

Part of the entertainment was provided by a female dancer whose performance was riveting. Before I realized what was happening, I felt like a general whose troops were clamouring for battle.

GUESTS *Encore, encore, Salome! Encore, encore! We want to see you dance again.*

HOST *What did you make of Salome's pantomime-dance?*

ONE GUEST *Well, it seemed to me that her dance represented a battle between two opposing armies.*

‘Do something for me before you go on,’ says Rosie. ‘Write down the Hebrew for SHULAMITE, and then write down the Hebrew for SALOME.’

All right. Here is SHULAMITE. (The second letter, wau, stands for the vowel U.)

שולמית

And here is SALOME.

שלמית

The army staff officers who were guests at Herod’s party might have taken more pleasure than the civilian guests in a martial pantomime-dance. Did Herod want these officers to approve his plans for war against Aretas, and did he gain their approval after his stepdaughter danced? (If you care to find out how Herod lost the war, read Josephus, *Jewish Antiquities* 18. 5. 1-2.)

Some commentators, following the Septuagint, take ‘the Shulamite’ to be Abishag the Shunnamite. In doing so, they ignore one intractable fact.

L is not the same as N.

Aldover in Spain has nothing to do with Andover in England. Likewise, Layland in West Virginia has nothing to do with Nayland in New Zealand.

While we don’t know who the Shulamite was, we can be sure that Herodias wove three verses from the Song of Solomon into the template of her evil scheme.

The Song of Solomon contains three passages in which ‘daughters of Jerusalem’ are associated with a negative imperation. Note that ‘daughters of Jerusalem’ *in the plural* are found nowhere in the Old Testament outside the Song of Solomon.

1. 5 I am black, but comely, O ye daughters of Jerusalem, as the tents of Kedar, as the curtains of Solomon. 1. 6 Look not upon me.....

3. 5 I charge you, O ye daughters of Jerusalem, by the roes, and by the hinds of the field, that ye stir not up, nor awake my love, till he please.

8:4 I charge you, O daughters of Jerusalem, that ye stir not up, nor awake my love, until he please.

Consider with great reverence the following words from Luke 23. 28.

But Jesus turning unto them said, Daughters of Jerusalem, weep not for me.....

In this utterly selfless speech, ‘daughters of Jerusalem’ are associated with a negative imperation. The Lord Jesus has already walked ‘in Solomon’s porch’ (John 10. 23). Now he uses the language of David’s son and heir, whose name is synonymous with wisdom. Why does he do so? First, because he himself is David’s son and heir. Secondly, because ‘Christ crucified’ represents the supreme wisdom of God (I Corinthians 1. 17-25).

God's wisdom was triumphant at Calvary. Some readers will know the Anglo-Norman *Laudes* of 1068.

Prudentia et iustitia nostra Christus vincit

(= Christ, our wisdom and our justice, is victorious).

Letitia et gloriatio nostra Christus vincit

(= Christ, our joy, and the object of our praise, is victorious).

The joyful man who speaks in Solomon's Song 2. 11 talks about *winter* and *rain* almost as things which have had to be endured and defeated. (Is the *winter* of Solomon's Song 2. 11 alluded to in John 10. 22?)

My beloved spake, and said unto me, Rise up, my love, my fair one, and come away. For, lo, the winter is past, the rain is over and gone; The flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land; The fig tree putteth forth her green figs, and the vines with the tender grape give a good smell. Arise, my love, my fair one, and come away.

Two taps on the garden gate kindle a flame of innocent mischief. Rosie's father, who suspects that we are all insane, has come over with a bag of Ausonia potatoes for our hostess. We decide to play him up.

'Let me start,' says Lettuce Girl.

I open the gate. Mr Stone gratefully takes a seat. Then Jane repeats mysteriously two lines of Anna Laetitia Barbauld which we have heard before.

*And now the vagrant Power no more detains
The vale of Tempe, or Ausonian plains.....*

Without knowing why, I quote two lines from *Mosella*, by Ausonius.

Hic solidae sternunt umentia litora harenae,

(= Here the damp shore is paved with hard-packed sand,

Nec retinent memores uestigia pressa figuras

In which imprinted footsteps may leave no lasting trace).

'I wonder if Ausonius is right,' says Miss Benn. 'The elect lady was a *dancer*.' She laughs at the sight of Mr Stone's face. 'Don't look so shocked, sir! We aren't suffering from sunstroke.' Delia pauses. 'Last night I came across a poem by Jean Toomer called "The Lost Dancer". Listen.' She points to the ground.

'Vibrations of the dance survive
The sand; the sand, elect, survives
The dancer.'

That is an amazing piece of language. But now Delia is murmuring a fragment of Theocritus, and I hear the words *καλα τεμπεα* (*kala tempea* = pleasant vale). Strange things are happening today. In 800 Greek gematria the words *καλα τεμπεα* add up to 483, *Mosella* is a poem of 483 lines, and three Hebrew words

from Psalm 49, which in the AV are rendered *I will incline mine ear to a parable*, add up in 400 Hebrew gematria to 483. We can look at the riddle of Psalm 49 for a second time in chapter 30. As we move towards the end of chapter 29, we shall consider the surviving literary works of a Persian queen. I happen to believe that as well as being the author of the book which bears her name, Esther is the author of Psalms 47, 49, 85, and 87. Some of my Hebraist friends are already gashing themselves with knives according to their manner, and herein.....

GETTING THINGS RIGHT IS A LONG-TERM BUSINESS

No academy should take itself and its own notions too seriously. How will the received ideas of today weather the passage of three thousand years? A Persian quatrain attributed to Omar Khayyam speaks about a great palace whose glory has departed.

دیدم که بر کنگره اش فاخته ای

We saw that on its pinnacle a dove

بنشسته همی گفت که: کو کو کو کو؟

Had settled. She kept crying, 'Where, where, where, where?'

The dove's repeated question *کو کو کو کو* sounds altogether derisive in Persian: 'Ku, ku, ku, ku?'. An English translator does well to turn the question into an exclamation: 'Coo, coo, coo, coo!'.

.....is a marvellous thing. These Hebraists have studied meticulously NOT ONE of the five works which I mention. Let me confront them with a statement. *Every quatrain of Edward Fitzgerald's Rubaiyat has been anagrammatized to give a new quatrain.* 'Incredible nonsense,' say the Hebraists. Wrong! Richard Brodie has done the job. Look at one pair of quatrains (first Fitzgerald, then Brodie).

The Palace that to Heav'n his Pillars threw,
And Kings the Forehead on his Threshold drew --
I saw the solitary Ringdove there,
And "Coo, coo, coo," she cried; and "Coo, coo, coo."

*Oh Castle high, on whose heraldic Door
Do these, the Royals of late honored Lines,
The Visage paint -- see that a Dove doth chirp,
A Cock doth crow, a Crow on Carrion dines.*

Coo, coo, coo, coo! Incredulity is often rooted not in scholarly caution, but in ignorance. By contrast, the careful study of a Biblical text may lead to new knowledge. Consider the case of David, Nabal, and Abigail. We're all familiar with the story (I Samuel 25). There was a time when David and his followers needed food. They were actually starving. The wealthy farmer Nabal refused to feed them, although he had given them no reward for keeping his property safe. David resolved to kill Nabal and all the males in his great household. Then Nabal's beautiful wife Abigail arrived with a supply of food. David saw that the LORD was feeding him, or preparing a table before him. Having abandoned his plan to commit a large number of murders, David realized that the LORD was

leading him in the paths of righteousness. He also perceived that the LORD's glory is displayed not only in mighty power, but also in goodness and mercy. Once he had eaten, David wrote the song which we know as Psalm 23.

The name of Abigail in Hebrew uses the letters aleph, beth, gimel, yodh, and lamedh. It may be spelled with one yodh, or with two yodhs.

אבגיל or אביגיל

Look at the Hebrew text of Psalm 23, which you wrote out eleven chapters ago.

מזמור לדוד יהוה רעי לא אחסר
בנאות דשא ירביצני על מי מנחות ינהלני
נפשי ישובב ינחני במעגלי צדק למען שמו
גם כי אלך בגיא צלמות לא אירא רע
כי אתה עמדי שבטך ומשענתך המה ינחמני
תעריך לפני שלחן נגד צררי
דשנת בשמן ראשי כוסי רוייה
אך טוב וחסד ירדפוני כל ימי חיי
ושבתי בבית יהוה לארך ימים

The psalm contains 219 letters, of which 78 are 'Abigail-letters' (shown in large print above). The fourth line of Hebrew text is represented in English as follows.

*Yea, though I walk through the valley of the shadow of death,
I will fear no evil.....*

Fourteen of line 4's twenty-four Hebrew letters are 'Abigail-letters'. Furthermore, the first four words of line 4 contain eleven letters, of which eight are 'Abigail-letters'.

Abigail has a very strong presence in Psalm 23. The six-letter form of Abigail's name (aleph-beth-yodh-gimel-yodh-lamedh) adds up in 22 Hebrew gematria to 38 = [2 x 19]. It is possible that the 219 Hebrew letters of the psalm allude to that gematric fact. But I reckon that the editor of the Psalter intends his ordinal number twenty-three to proclaim *the glory of God*.

In Hebrew kaph-beth-wau-daleth (= glory) has a 22 gematric value of 23.

The first three words of the Hebrew text's penultimate line (= Surely goodness and mercy) enfold the Hebrew word for 'glory'. Look at the second, fifth, sixth, and ninth letters of the line. The second letter is a final kaph.

אך טוב והסד

Hidden within the word kaph-beth-wau-daleth are the letters teth, wau, cheth, and samekk, which in 22 gematria add up to 38. As we have already observed, the six-letter form of Abigail's name (aleph-beth-yodh-gimel-yodh-lamedh) adds up in 22 Hebrew gematria to 38. What is David telling us? That the glorious goodness and mercy of the LORD will follow both Abigail and David.

Less than a fortnight after Abigail went back to the farm, Nabal died. (It is possible that he was allowed to repent before his death.) David married the wise and beautiful Abigail at once. We exegetes can rejoice to see that God's GLORY includes God's PROVISION for those who love him! Let us read a well-known English rendering of Psalm 23 in the light of what we have learned.

1 The LORD is my shepherd; I shall not want.

2 He maketh me to lie down in green pastures: he leadeth me beside the still waters.

3 He restoreth my soul: he leadeth me in the paths of righteousness for his name's sake.

4 Yea, though I walk through the valley of the shadow of death, I will fear no evil: for thou art with me; thy rod and thy staff they comfort me.

5 Thou preparest a table before me in the presence of mine enemies: thou anointest my head with oil; my cup runneth over.

6 Surely goodness and mercy shall follow me all the days of my life: and I will dwell in the house of the LORD for ever.

In Psalm 23 David takes shelter under the wings of the merciful Spirit of God. [Reverently look up Psalm 17. 8, Psalm 63.7, Ruth 2. 12, and Matthew 6. 37.] The 219 Hebrew letters of Psalm 23 comprise a three-letter centre (אתה) plus two 108-letter wings. In 400 gematria 219 is the value of הרוח (the Spirit), while 108 is the value of חנן (= mercy), and 406, the value of אתה, is double the value of אבר (wing).

It remains to speak about the wife of another king. Look at Esther 9. 29.

Then Esther the queen, the daughter of Abihail, and Mordecai the Jew, wrote with all authority, to confirm this second letter of Purim.

In Hebrew Bibles the first word of Esther 9. 29 (= [Then]....wrote), which is spelled wau-tau-kaph-tau-beth, has its second letter (tau) printed in large type.

ותכתב

No one has ever accounted credibly for the 'big tau'.

When its preficial conjunctive wau is left aside, the word tau-kaph-tau-beth may be translated SHE WROTE.

ותכתב

If any word is going to tell us about Esther's written works, it will be the 'authorial' verb wau-tau-kaph-tau-beth. And if that 'authorial' verb has a unique written form, we should study it carefully.

ותכתב

The FIVE letters of the word wau-tau-kaph-tau-beth speak of Esther's FIVE contributions to the Hebrew Bible.

The big tau speaks of *one big work*, and the four smaller letters speak of *four smaller works*. Furthermore, the two sizes of letter tell us that the word wau-tau-kaph-tau-beth must be read in *two gematric manners*.

The word wau-tau-kaph-tau-beth has a 400 gematric value of $[6 + 400 + 20 + 400 + 2] = 828$.

When the big tau is taken to be a member of the largest-value alphabet, the 406 alphabet, it has a value of 406, and the word wau-TAU-kaph-tau-beth has a value of $[6 + 406 + 20 + 400 + 2] = 834$.

Observing that in 400 gematria the Hebrew name of Esther (aleph-samekh-tau-resh) adds up to 661, and that in 400 gematria the articulate Hebrew word for 'queen' (he-mem-lamedh-kaph-he) adds up to 100, we shall now consider some numerical facts about the Hebrew Bible.

The book of Esther contains 167 verses, and Psalm 49 contains 167 words.

Psalm 47 contains 77 words, while Psalm 85 contains 96 words, so taken together Psalms 47 and 85 contain a total of 173 words. Psalm 87 contains 54 words.

Psalms 47, 49, and 85 (AV) all bear the heading *To the chief Musician, a Psalm for the sons of Korah*. In 400 gematria the four Hebrew words thus rendered.....

למנצח לבני-קרח מזמור

lamedh-mem-nun-tzaddi-cheth lamedh-beth-nun-yodh

qoph-resh-cheth mem-zayin-mem-wau-resh

.....add up to 911, which may be read as QUEEN ESTHER, thus.

661 (ESTHER) + $[100$ (QUEEN) = (2×50) interpreted as 250] = 911

Look now at the two gematric values of wau-tau-kaph-tau-beth.

828

834

There are 167 verses in the book of Esther, and 167 words in Psalm 49.

$$828 = 661 (\text{ESTHER}) + 167$$

Psalms 47 and 85, taken together, contain a total of 173 words.

$$834 = 661 (\text{ESTHER}) + 173$$

Psalm 87 contains 54 words.

$$[83 + 4] = 87, \text{ and } [8 \times 34] = 272, \text{ and } [27 \times 2] = 54$$

Look once again at Esther 9. 29.

Then Esther the queen, the daughter of Abihail, and Mordecai the Jew, wrote with all authority, to confirm this second letter of Purim.

The chapter-and-verse number 9. 29 may be interpreted as 929, which is the sum of 661 (ESTHER) and 268.

‘What’s the big deal about 268?’ asks Mr Stone.

Well, now. The number 268 enfolds the ordinal numbers of the four psalms which were written by Esther.

$$47 + 49 + 85 + 87 = 268$$

We’re nearly there! In 400 gematria the heading of Psalm 87 (*A Psalm or Song for the sons of Korah*).....

לבני-קרח מזמור שיר

lamedh-beth-nun-yodh qoph-resch-cheth
mem-zayin-mem-wau-resch shin-yodh-resch

.....adds up to 1203, which is the sum of 929 and 274.

$$661 + [47 + 49 + 85 + 87] = 929$$

$$929 + 274 = 1203$$

‘Here I go again,’ says Rosie’s father. ‘What’s the big deal about 274?’

The number 274 is the 400 gematric value of mem-resch-daleth-kaph-yodh (= Mordecai).

By composing a heading which adds up to [929 + 274], Esther is acknowledging that she has written Psalm 87 with the assistance of Mordecai.

In 22 Hebrew gematria he-daleth-samekh-he (= Hadassah, Esther’s Hebrew name) has a value of 29, while mem-resch-daleth-kaph-yodh (= Mordecai) has a value of 58.

Eighty-seven is the sum of twenty-nine and fifty-eight.

Esther and Mordecai may have had a lot to do with numbering the Psalms, and even with editing the Psalter.

Now think back to the two gematric values of wau-tau-kaph-tau-beth, 828 and 834. The sum of 828 and 834 is 1662, which when read backward as |2| |661| may be taken to indicate that Esther, whose name adds up in 400 gematria to 661, is represented in TWO books of the Hebrew Bible.

‘I’ve noticed something else,’ says Delia. ‘In 400 gematria QUEEN ESTHER adds up to 761.’ She pauses. ‘761 is the reversal of 167. There are 167 verses in the book of Esther, and 167 words in Psalm 49.’

Well done! And there’s more. Look at verse 5 of Psalm 49 (verse 4 in the AV).

אטה למשל אזני אפתח בכנור חידתי

(= I will incline mine ear to a parable: I will open MY DARK SAYING upon the harp).

The last word cheth-yodh-daleth-tau-yodh (= my dark saying) has a 400 gematric value of 432. We have observed that the 400 gematric value of ESTHER is 661.

$$[6 \times 61] + [66 \times 1] = 432$$

Another cryptogram hides in verse 2 of the psalm (verse 1 in the AV).

שמעו-זאת כל-העמים האזינו כל-ישבי חלד

(= Hear THIS, all ye people; give ear, all ye inhabitants of the world).

The second word zayin-aleph-tau (= this) is feminine in gender, and singular in number. We should therefore construe the two words שמעו-זאת as follows: HEAR THIS FEMININE PERSON OR THING.

Does zayin-aleph-tau denote a person or a thing? And if it denotes a thing, WHAT IS THE THING? It can’t be the masculine-gender ‘Psalm’ (mem-zayin-mem-wau-resh). The only audible feminine-singular thing in the Hebrew text of verses 1-5 is the word rendered ‘my dark saying’ (cheth-yodh-daleth-tau-yodh: line 5, final word, underlined), but the demonstrative word zayin-aleph-tau (line 2, second word, underlined) cannot point to such a distant piece of the text.

למנצח לבני-קרח מזמור
שמעו-זאת כל-העמים האזינו כל-ישבי חלד
גם-בני אדם גם-בני-איש יחד עשיר ואביון
פי ידבר חכמות והגות לבי תבונות
אטה למשל אזני אפתח בכנור חידתי

To the chief Musician, a Psalm for the sons of Korah. Hear **THIS**, all ye people; give ear, all ye inhabitants of the world: Both low and high, rich and poor, together. My mouth shall speak of wisdom; and the meditation of my heart shall be of understanding. I will incline mine ear to a parable: I will open **MY DARK SAYING** upon the harp.

Reason is a wonderful faculty. When you have excluded the impossible, as Sherlock Holmes says, whatever remains must be the truth. It is clear that the word zayin-aleph-tau, which has a 400 gematric value of 408 and a 22 gematric value of 30, should be construed THIS WOMAN [= the female author of Psalm 49]. Who is the woman? We can find out by putting the two gematric values of zayin-aleph-tau to work.

$$408 + [30 = (2 \times 5 \times 3) \text{ interpreted as } 253] = 661 \text{ (ESTHER)}$$

The 400 gematric value of Esther's name is 661, and the reversal of 661 is 166, which is the 400 gematric value of ayin-lamedh-yodh-wau-nun (= 'the Most High', or 'the Highest': a name of God). Esther herself uses ayin-lamedh-yodh-wau-nun as a name of God in Psalms 47 and 87. Any literate Jewish reader would have been able to discern the presence of God in the queen's name. Always remember what Esther says in chapter 8, verse 5 of her own book:

LET IT BE WRITTEN TO REVERSE THE LETTERS.....

The number 166 is also encrypted in the first and last words of the book of Esther (respectively wau-yodh-he-yodh, which has a 400 gematric value of 31, and zayin-resh-ayin-wau, which has a 400 gematric value of 283).

$$[\text{ויהי} = 31] + [\text{זרעו} = 283] = 314, \text{ and } [(3 \times 14) + (31 \times 4)] = 166$$

Note that in 400 gematria the word wau-yodh-he-yodh has the same value (31) as the word aleph-lamedh (= God), and that in 22 gematria the word ayin-lamedh-yodh-wau-nun has the same value (58) as aleph-samekh-tau-resh (= Esther).

ויהי אל עליון אסתר

Look now for a moment at Esther 8. 17.

And in every province, and in every city, whithersoever the king's commandment and his decree came, the Jews had joy and gladness, a feast AND A GOOD DAY (ויום טוב: words 17 and 18). And many of the people of the land became Jews; for the fear of the Jews fell upon them.

On the surface the phrase ויום טוב really does mean 'and a good day'. (It appears also in Esther 9. 19, words 17 and 18.) Below the surface it denotes something very specific. In 400 gematria the word ויום (= and a day) adds up to 62, and the word טוב (= good) adds up to 17. In the course of their celebrations all the Jews performed a short psalm which Mordecai had recently composed.

O praise the LORD, all ye nations: praise him, all ye people. For his merciful kindness is great toward us: and the truth of the LORD *endureth* for ever. Praise ye the LORD.

The Hebrew text of that psalm comprises *sixty-two* letters, or *seventeen* words.

Letters 45, 41, 47, and 34 of Psalm 117 spell the name of ESTHER (אסתר). The sum of 45, 41, 47, and 34 is 167, and there are 167 verses in the book of Esther. Remember what Delia told us a short time ago: that 167 is the reversal of 761, and that in 400 gematria QUEEN ESTHER (המלכה אסתר) adds up to 761.

הללו את יהוה כל גוים שבחוהו כל האמים כי גבר עלינו ה' וְאִמַּתְּ יְהוָה לְעוֹלָם הִלְלוּ יְהוָה

Letters 1, 56, and 38 of Psalm 117 spell the name of HAMAN (המן: he-mem-nun). The sum of 1, 56, and 38 is 95, which is the 400 gematric value of Haman's name.

הללו את יהוה כל גוים שבחוהו כל האמים כי גבר עלינו חסדו ואמת יהוה לעולם הללו יה

'If you read backward from letter 49 of Psalm 117,' says Greta, 'and leave sixteen-letter gaps, you get the name of HEGAI (הגי: he-gimel-yodh).' She points to her notebook. 'Hegai was the keeper of the women. He was kind to Esther.'

הללו את יהוה כל גוים שבחוהו כל האמים כי גבר עלינו חסדו ואמת יהוה לעולם הללו יה

The name of MORDECAI (מרדכי: mem-resh-daleth-kaph-yodh) adds up to 58 in 22 gematria, and to 274 in 400 gematria. Psalm 117's first two Hebrew words add up to 58 in 22 gematria, and to 472 in 400 gematria. 472 is the reversal of 274.

הללו את יהוה כל גוים שבחוהו כל האמים כי גבר עלינו חסדו ואמת יהוה לעולם הללו יה

Letters 19, 34, 18, 20, 38, and 21 of Psalm 117 spell the name of HARBONAH (הרבונה: cheth-resh-beth-wau-nun-he). The sum of 19, 34, 18, 20, 38, and 21 is 150. Harbonah's name adds up to 1464 in 406 gematria, and to 503 in [400 + 22 + 28] gematria. [146 + 4] = 150, and [50 x 3] = 150. Who wrote Psalm 150?

הללו את יהוה כל גוים שבחוהו כל האמים כי גבר עלינו חסדו ואמת יהוה לעולם הללו יה

If you read forward from letter 1 of Psalm 117, and leave four-letter gaps, you get the name of HATACH (התך: he-tau-kaph), the message-bearer of Esther 4. 5ff.

הללו את יהוה כל גוים שבחוהו כל האמים כי גבר עלינו חסדו ואמת יהוה לעולם הללו יה

We may construe the 400 Hebrew gematric value of Esther 8. 17 (6117) as follows. 'Behold [Psalm] 117!' The word הֵא (= behold, or lo), which Joseph uses in Genesis 47. 23, has a 400 gematric value of six.

In the face of a reference to the Psalter, should we piously deplore the fact that God's name is nowhere mentioned in the book of Esther? No! We read the Bible in order to see what it contains. If we tell ourselves in advance that we know what the Bible *ought* to contain, we shall be unable to read it rationally.

Here are two facts. In his sixth Brandenburg Concerto, Bach writes for an orchestra which contains no violins. In his opera *Akhnaten*, Philip Glass writes for an orchestra which contains no violins. Only foolish people will hasten to deplore these two facts. Intelligent people will listen to the music, and marvel at what the two composers have done.

There may come times when the servant of God will say, like Isaiah, *Verily thou art a God that hidest thyself, O God of Israel, the Saviour.* And yet from Massachusetts to Mexico, from Tempe to Tenerife, from Siloam to Susa, as an alliterative preacher would say, God is continually at work AS SAVIOUR in the life of his servant. He never leaves himself without a witness.

We mustn't try to make the Bible more religious than it is. I have always abhorred the pious notion that *Selah* means STOP THE MUSIC AND MEDITATE.

Likewise, I have never believed that St John ended his second letter.....

The children of thy elect sister greet thee. Amen.

.....with the impossible word AMEN. You may as well say,

The window-cleaner called today. Amen.

It is likely that verse 13 of II John (ΑΣΠΑΖΕΤΑΙ ΣΕ ΤΑ ΤΕΚΝΑ ΤΗΣ ΑΔΕΛΦΗΣ ΣΟΥ ΤΗΣ ΕΚΛΕΚΤΗΣ), which in the original Greek is more expansively urbane than verse 1 (Ο ΠΡΕΣΒΥΤΕΡΟΣ ΕΚΛΕΚΤΗ ΚΥΡΙΑΙ ΚΑΙ ΤΟΙΣ ΤΕΚΝΟΙΣ ΑΥΤΗΣ, etc.), was written by the 'elect lady', and that John is quoting the final sentence of Salome's most recent communication by way of validating his own letter.

A SALUTE FROM THE QUEEN OF LESSER ARMENIA

Salome has written the first six Greek words of I Peter 5. 13: ΑΣΠΑΖΕΤΑΙ ΥΜΑΣ Η ΕΝ ΒΑΒΥΛΩΝΙ ΣΥΝΕΚΛΕΚΤΗ (= She who is in Babylon, Elect-with-you, salutes you). I reckon that Salome was called ΛΩ (= LO) by her friends. Dative-case ΒΑΒΥΛΩΝΙ (= Babylon) encodes nominative-case ΝΙΚΟΠΟΛΙΣ (= Nicopolis, the capital city of Lesser Armenia, of which Salome became queen when she married Aristobulus). In 800 and 24 gematria ΒΑΒΥΛΩΝΙ adds up respectively to 1295 and 82, while ΝΙΚΟΠΟΛΙΣ adds up respectively to 540 and 116. Note that $12 \times 9 \times 5 = 540$, and that $8 \times 2 = 1 \times 16$. How many cryptograms can you find in I Peter 5. 13? Or in the meticulously crafted language of Titus 3. 12 (printed below)?

Όταν πεμψω Αρτεμαν προς σε η Τυχικον σπουδασον ελθειν προς με εις ΝΙΚΟΠΟΛΙΝ εκει γαρ κεκρικα παραχειμασαι.

When I shall send Artemas unto thee, or Tychicus, be diligent to come unto me to NICOPOLIS: for I have determined there to winter.

Of course the words of II John 13 may equally apply to John's children, and to his wife, but having an Elect Female Person at the end of the letter helps to camouflage the Elect Female Person who is greeted at its beginning. If a dangerous enemy of the church manages to read the letter, he will be bemused. 'These Christians are all helplessly obsessed with the word *elect*,' he will think.

Not so! The Greek word Εκλεκτη may well represent a nickname which was given to Salome by the risen Lord Jesus. Early in the morning Salome, the only daughter of Philip and Herodias, brought spices to the Lord's tomb. In the Septuagint, the adjective εκλεκτος is used in connection with BURIAL (Genesis 23. 6), with MYRRH (Exodus 30. 23), and with a girl who as well as being THE ONLY ONE OF HER MOTHER (Song of Solomon 6. 8: AV, 6. 9), is associated with the SUN, as indeed with MORNING (Song of Solomon 6. 9: AV, 6. 10). The girl described by Solomon ('terrible as an army with banners') is the Shulamite, whose pantomime-dance suggests 'the company of two armies'. Read verses 8, 9, 10, and 16 of Psalm 45 in the New International Version. How might those verses have been construed by the women of Mark 16. 1 at a later time? Salome is with the two Maries in Mark 15. 40, and also in Mark 16. 1, but she is not with them in Mark 15. 47. Did Herod send out a number of guards to bring his stepdaughter back to the palace? If so, how might Song of Solomon 5. 7 have been construed by Salome at a later time? I wonder if Salome, the stepdaughter of Herod Antipas, and the elect lady of II John, is a relation of the faithful martyr Antipas whom the Lord Jesus commends in Revelation 2. 13. If she is, what a triumph for John the Baptist, and what a victory for the Lord Jesus Christ!

Let's move on. If John 13 needs an *Amen* about as much as Balaam's donkey needed an elocution lesson. By contrast, the double *Amen* which ends Psalm 89 has the important job of recording the two vowels of YAHWEH (yodh-he-wau-he: Jehovah). Ethan is concerned with the distant future. Read verse 1 of Psalm 89 in the AV.

I will sing of the mercies of the LORD FOR EVER: with my mouth will I make known thy faithfulness TO ALL GENERATIONS.

Now read verse 52.

Blessed be the LORD FOR EVERMORE. Amen, and Amen.

The AV's phrase *Amen, and Amen* renders the following two Hebrew words.

אֲמֵן וְאֲמֵן

Under five of the seven Hebrew letters you can see vowel-signs which were added by scribes in a later age.

The colon-thing under the fourth letter (wau = *and*) denotes a very short E.

The tiny T-thing which appears under each aleph denotes a long A, and the pair of side-by-side dots which appears under each mem denotes a long E.

When the Psalms come to be sung 'in states unknown, and accents yet unborn', those who sing them will need to know how the name of Yahweh is pronounced.

The replacement in speech of yodh-he-wau-he by aleph-dalet-wau-nun-yodh (= Adonai) represents a later pietism which

1. was not employed by the Psalmists,
2. regularly throws the syllable-count of a song-text, and
3. causes the sung text of Psalm 8 to begin with a notable infelicity.

We've seen how Ethan's 'grand Amen' involves the Hebrew phrase אֲמֵן וְאֲמֵן (aleph-mem-nun we-aleph-mem-nun).

| | | |
|------------------------------|--------------------------|----------|
| In the 400 gematric alphabet | אֲמֵן וְאֲמֵן adds up to | 188, |
| In the 22 gematric alphabet | אֲמֵן וְאֲמֵן adds up to | 62, |
| In the 406 gematric alphabet | אֲמֵן וְאֲמֵן adds up to | 626, and |
| In the 28 gematric alphabet | אֲמֵן וְאֲמֵן adds up to | 212. |

These totals may be transmuted so as to yield the number 26, which is the value of yodh-he-wau-he (= Yahweh) in both 400 and 22 gematria.

| | | |
|----------------------------------|-----------------|--------------------|
| 188 interpreted as [18 + 8] | becomes | 26, |
| 62 read backward | becomes | 26, |
| [188 + 62 + 626 + 212] | add up to | 1088, |
| 1088 interpreted as [10 + 8 + 8] | becomes | 26, and |
| 1088 may be expressed as | [1 + 0 + 8 + 8] | x 2 ⁶ . |

The double Amen which Ethan places in Psalm 89. 53 preserves the vowels of Yahweh's name.

So does the double Amen which David places in Psalm 72. 19.

So does the double Amen which David places in Psalm 41. 14.

It is interesting to see how three referential numbers from the Hebrew Bible combine, under a Supervising Editor's hand, to declare the name of the LORD.

Psalm 89. 53

Psalm 72. 19

Psalm 41. 14

$$[89 \times 53] + [72 \times 19] + [41 \times 14] = 6659, \text{ and } [6 + 6 + 5 + 9] = 26$$

Every word in the Bible matters. Even the word WORDS in Luke 3. 4.

As it is written in the book of the WORDS of Esaias the prophet, saying.....

The AV's phrase *of the words* renders the inarticulate genitive-case Greek word λογων (lambda-omicron-gamma-omega-nu), which has a 24 gematric value of SIXTY-SIX. Why does St Luke bother to say *in the book OF THE WORDS of Esaias the prophet*? Is he at pains to declare that the SIXTY-SIX chapters of Isaiah's prophecy were all written by a single author?

He must have a reason for writing as he does. Intelligent writers do things for a reason. Intelligent readers look for the reason.

Consider two Hebrew words which appear in Isaiah 34. 11b.

וְנִטְהַר עָלֶיהָ קוֹ תְהוֹ וְאֲבָנֵי בְהוּ

(= and he shall stretch out upon it the line of TOHU, and the stones of BOHU).

It represents the most pitiable idleness to say, 'Isaiah is merely being poetic.'

Tohu is one specific thing, and *bohu* is another specific thing.

[A NOTE FOR TRANSLATORS OF GENESIS 1. 2!]

While *tohu* is associated with a measuring-line, *bohu* is associated with a plumb-line. The two words have to do with particular dimensions and particular angles. So if *tohu* and *bohu* are two vapours, or gases, they will have particular chemical properties. When we come to translate Isaiah 34. 11b, or Genesis 1. 2a, or Ecclesiastes 1. 2 (he-beth-lamedh = *l*), we must not be content to turn specific words into meaningless slush. Excuse me while I put the kettle on.

(Hark, the doorbell! A park ranger has come to bring me wonderful news about free rose-bushes. Such a herald deserves to partake of our cakes and tea.)

There is no such thing as 'merely being poetic'. A competent user of language is always at pains to make his words mean more, not less. I'm going to say it again. Every word in the Bible matters. In fact, every letter in the Bible matters.

We've already seen how much depends on the 'big tau' of Esther 9. 29. You recall the two gematric values of wau-TAU-kaph-tau-beth, 828 and 834. Let me

repeat some of what I said in connection with those two values, and then I'll make one final observation.

There are 167 verses in the book of Esther, and 167 words in Psalm 49.

828 = 661 (ESTHER) + 167

Psalms 47 and 85, taken together, contain a total of 173 words.

834 = 661 (ESTHER) + 173

Here goes. 173 exceeds 167 by six. In both 400 and 22 gematria, six is the value of the Hebrew word wau (= and).

The bigger-by-six number 173 may therefore be seen as denoting 'one thing AND another thing' (viz Psalm 47 AND Psalm 85).

We've nearly done. The Hebrew word מרחפת (= hovered), which appears in Genesis 1. 2, has a 28 gematric value of 173. What brings that arcane fact into my mind? Well, the sun has only begun to set, but a musical creature of the night is flying around outside. Françoise Sagan would record the moment as follows. *Une chauve-souris vint décrire des courbes soyeuses devant la fenêtre* (= A visiting bat began to perform fluent arcs in front of the window).

Ooohhh! Unaccountable things surface in the memory when one is fighting a battle with sleep. At the age of seventeen I discovered an integer sequence in which 173 was the third term. The sequence has the formula $14n^3 - 30n^2 + 24n - 7$, and it runs as follows.

1 33 173 505 1113 2081.....

Each term of the sequence translates the corresponsive centred hexagonal number into three dimensions.

33 is [7 + 19 + 7];

173 is [19 + 37 + 61 + 37 + 19];

505 is [37 + 61 + 91 + 127 + 91 + 61 + 37], and so on.

If you have 173 glass marbles and a glue-gun, you can make an abstract sculpture for your vestibule. A tiny bulb set in place of the eighty-seventh or central marble will turn your glass sculpture into a lamp. Make two hexagons of 19 marbles, two hexagons of 37 marbles, and one hexagon of 61 marbles. Then assemble the five hexagons as follows:

19 (on the bottom), 37, 61, 37, 19 (on the top).

In 22 gematria 173 is the value of the Hebrew letter-names mem resh cheth pe tau, and also of the Hebrew sentence ayin-wau-pe ayin-lamedh kaph-nun-pe-yodh ayin-teth-lamedh-pe (= flew upon the wings of a bat).

מים ריש חית פא תו = עוף על כנפי עטלף

CHAPTER 30: THE MOUNTAIN OF THE LORD

יִקְרָא אַבְרָהָם שֵׁם הַמְּקוֹם הַהוּא יְהוָה יִרְאֶה אֲשֶׁר יֹאמַר הַיּוֹם בְּהָר יְהוָה יִרְאֶה

And Abraham called the name of that place Jehovahjireh: as it is said to this day, In the mount of the LORD it shall be seen.

Genesis 22. 14

(Hark, the doorbell! Jane Dascey has come over to borrow a lyre.)

Herodotus begins the eighth book of his *History* as follows.

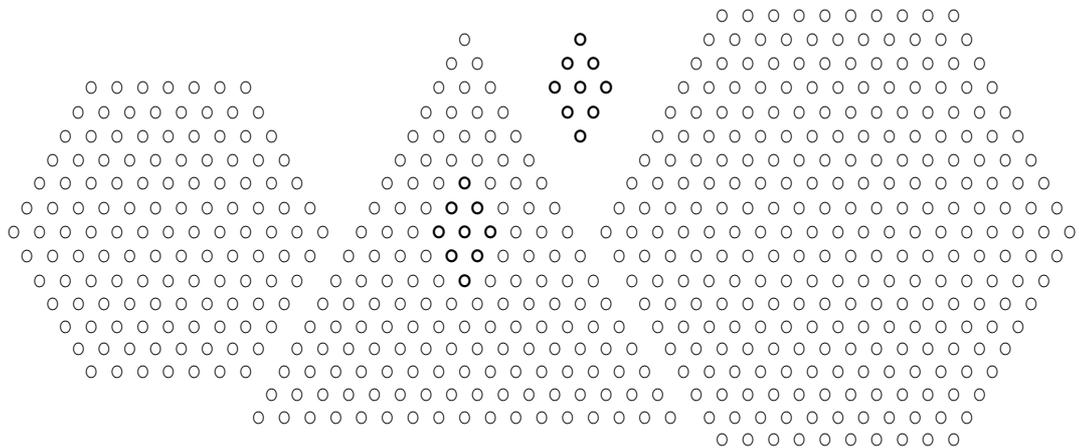
Οἱ δὲ Ἑλλήνων ἐς τὸν ναυτικὸν στρατὸν ταχθέντες ἦσαν οἶδε, Ἀθηναῖοι μὲν νέας παρεχόμενοι ἑκατὸν καὶ εἴκοσι καὶ ἑπτὰ· ὑπὸ δὲ ἀρετῆς τε καὶ προθυμίας Πλαταιέες ἄπειροι τῆς ναυτικῆς ἔόντες συνεπλήρουν τοῖσι Ἀθηναίοισι τὰς νέας. Κορίνθιοι δὲ τεσσαράκοντα νέας παρείχοντο, Μεγαρέες δὲ εἴκοσι. Καὶ Χαλκιδέες ἐπλήρουν εἴκοσι, Ἀθηναίων σφι παρεχόντων τὰς νέας, Αἰγινῆται δὲ ὀκτωκαίδεκα, Σικυώνιοι δὲ δυοκαίδεκα, Λακεδαιμόνιοι δὲ δέκα, Ἐπιδαύριοι δὲ ὀκτώ, Ἐρετριέες δὲ ἑπτὰ, Τροιζήνιοι δὲ πέντε, Στυρέες δὲ δύο, καὶ Κήιοι δύο τε νέας καὶ πεντηκοντέρους δύο. Λοκροὶ δὲ σφι οἱ Ὀπούντιοι ἐπεβοήθειον πεντηκοντέρους ἔχοντες ἑπτὰ. ἦσαν μὲν ὧν οὔτοι οἱ στρατευόμενοι ἐπ' Ἀρτεμίσιον, εἴρηται δὲ μοι καὶ ὡς τὸ πλῆθος ἕκαστοι τῶν νεῶν παρείχοντο. ἀριθμὸς δὲ τῶν συλληχθεισέων νεῶν ἐπ' Ἀρτεμίσιον ἦν, πᾶρες τῶν πεντηκοντέρων, διηκόσια καὶ ἑβδομήκοντα καὶ μία.

Readers of my own vintage will want me to quote the careful rendering of George Rawlinson (1812-1902).

The Greeks engaged in the sea-service were the following. The Athenians furnished a hundred and twenty-seven vessels to the fleet, which were manned in part by the Plataeans, who, though unskilled in such matters, were led by their active and daring spirit to undertake this duty; the Corinthians furnished a contingent of forty vessels; the Megarians sent twenty; the Chalcideans also manned twenty, which had been furnished to them by the Athenians; the Eginetans came with eighteen; the Sicyonians with twelve; the Lacedaemonians with ten; the Epidaurians with eight; the Eretrians with seven; the Troezenians with five; the Styreans with two; and the Ceans with two triremes and two penteconters. Last of all, the Locrians of Opus came in aid with a squadron of seven penteconters. Such were the nations which furnished vessels to the fleet now at Artemisium; and in mentioning them I have given the number of ships furnished by each. The total number of the ships thus brought together, without counting the penteconters, was two hundred and seventy-one.....

Penteconters are not insignificant little skiffs. They are fifty-oared ships. Why does Herodotus leave them out of the count? Maybe because he wants to play with figurate numbers. 127 ships are furnished to the fleet by the Athenians, and the total number of ships is 280. By leaving out the nine penteconters, Herodotus can begin and end his description of the fleet with a centred hexagonal number made up of the digits 1, 2, and 7. Notice that 153 ships relate to non-Athenians, and that 153 is the triangular number of 17. Herodotus is far more *literary* than some modern scholars realize. He names the nine books of

his *History* after the nine muses! Now the nominative-case Greek word for *Muses*, Μουσαι, has an 800 gematric value of 721, which apart from being the reversal of 127 is the centred hexagonal number of 16. Furthermore, 721 minus the pentaconterless total of 271 leaves 450, the number of oars employed by nine pentaconters. It is possible that in detaching the nine pentaconters from his count of the fleet, Herodotus is alluding privately to the nine parts of his own great opus, and participating as an artist in the events which he describes.



We've seen that the number of ships belonging to non-Athenians is 153, the triangular number of 17. Both 153 and 17 are odd numbers. What did Herodotus think about odd numbers? I don't know. Some ancient Greek writers believed that *odd numbers were male*. No sensible person will waste time in considering such a stupid notion. Let me pause here to liquidate a phrase which nerdarchs love. There was never any such unified thing as 'ancient wisdom'. In the past, many different people believed many different things, and some of the things that they believed were wrong. (Male numbers. Four elements. Seven planets.)

Irrelevance can be nearly as annoying as actual error. I mean to say, exponents of 'ancient wisdom' often adduce mathematical facts when they have nothing to say. *153 is the long hexagonal number of nine. So what? 153 is the sum of one factorial, two factorial, three factorial, four factorial, and five factorial.* Big deal! Here's an exciting piece of British news from May 2008. Are you ready? *153 hens were liberated from an intensive battery farm in Somerset.*

Envy those hens, ye cloistered pundits! Now let's get back to the Bible. If we want to understand the number of fish which are caught in John 21. 11, we need to know that 153 is the triangular number of 17, and that 17 is the value in both 400 and 22 gematria of the Hebrew word teth-wau-beth (= good, or goodness).

Ανεβη Σιμων Πετρος και ειλκυσεν το δικτυον επι της γης μεστον ιχθυων μεγαλων εκατον πεντηκοντατριων και τοσουτων οντων ουκ εσχισθη το δικτυον.

Simon Peter went up, and drew the net to land full of great fishes, an hundred and fifty and three: and for all there were so many, yet was not the net broken.

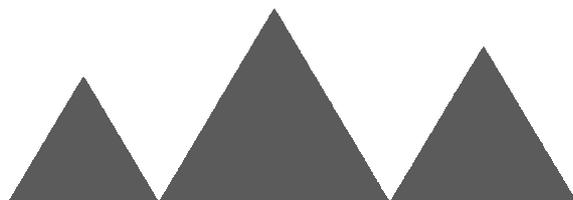
There are two other facts that we need to know. First, 153 is the 400 gematric value of the Hebrew phrase beth-nun-yodh he-aleph-lamedh-he-yodh-mem (= sons of God). Secondly, the holy mountain of 4122 uses the number 153 as its base-line. 153 is the sum of thirty-nine, fifty-one, and sixty-three. The triangular number of thirty-nine is 780, the triangular number of fifty-one is 1326, and the triangular number of sixty-three is 2016. When you.....

‘Hold on,’ says Rosie, as she enters the room. ‘What *is* the holy mountain?’

It is the governmental centre of the universe. We find the holy mountain represented numerically in Psalm 49 4-5, and elsewhere. Let me talk about the trimontane number 4122 before we look at Psalm 49 for a second time.

4122 represents the holy mountain in heaven, which is composed of three triangular-number peaks.

THE HOLY MOUNTAIN IN HEAVEN



The triangular numbers of 39, 63, and 51 are respectively 780, 2016, and 1326.

$$780 + 2016 + 1326 = 4122$$

You remember from page 535 how the number 4122 ‘changes shape’ three times so as to generate its own reversal.

$$[4 \times 122] + [14 \times 22] + [412 \times 2] = 2214$$

And you perceive that the number 2214, like its reversal, is made up of three triangular-number peaks.

THE REFLECTION OF THE HOLY MOUNTAIN ON EARTH



The triangular numbers of 26, 54, and 27 are respectively 351, 1485, and 378.

$$351 + 1485 + 378 = 2214$$

The riddle of Psalm 49 involves two six-word members which appear as verses 4 and 5 of the Hebrew text (= verses 3 and 4 of the AV).

פִּי יִדְבַר חִכְמוֹת וְהַגּוֹת לִבִּי תְבוּנוֹת

(= My mouth shall speak of wisdom; and the meditation of my heart shall be of understanding).

אֶטָה לְמִשְׁלַל אָזְנִי אֶפְתַּח בְּכִנּוֹר חֵידָתִי

(= I will incline mine ear to a parable: I will open my dark saying upon the harp).

The numbers of letters contained by the twelve Hebrew words of the riddle may be represented as follows. Note that $[245 + 536 + 344 + 455] = [20 \times 79]$.

(verse 4) 2-4-5 5-3-6
 (verse 5) 3-4-4 4-5-5

You may find it convenient to denote the 400 gematric values of the twelve Hebrew words respectively by the letters A to L.....

A = 90, B = 216, C = 474, D = 420, E = 42, F = 864,
G = 15, H = 400, I = 68, J = 489, K = 278, L = 432

.....and to denote the 22 gematric values of the twelve Hebrew words respectively by the letters M to X.

M = 27, N = 36, O = 60, P = 42, Q = 24, R = 72,
S = 15, T = 58, U = 32, V = 48, W = 53, X = 54

Note that $9 + 0 + 2 + 1 + 6 + 4 + 7 + 4 + 4 + 2 + 0 + 4 + 2 + 8 + 6 + 4 = 63$,
 and that $1 + 5 + 4 + 0 + 0 + 6 + 8 + 4 + 8 + 9 + 2 + 7 + 8 + 4 + 3 + 2 = 71$,
 and also that $972 + 864 + 768 + 729 + 648 + 576 + 512 + 486 + 432 + 384 = 6371$.

You can see how the 400 gematric values of verse 4 combine.

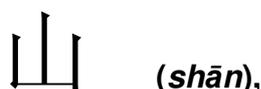
A + B + C = 780, the triangular number of 39.

D + E + F = 1326, the triangular number of 51.

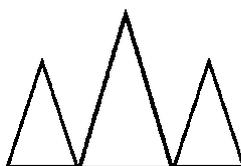
B + C + D + E + F = 2016, the triangular number of 63.

The three triangular 'mountains' 780, 1326, and 2016 form a little range which adds up to 4122 (= the sum of 39^2 and 51^2).

Some readers are aware that the Akkadian logogram  (= mountain) is a three-piece affair. As they consider the Icelandic landscape of the front cover, these readers may remember that the Chinese character which denotes 'mountain[s]',



began its life as a pictographic representation of three peaks.



We've seen how the trimontane number 4122 can generate its own mirror-image.

$$[4 \times 122] + [41 \times 22] + [412 \times 2] = [488 + 902 + 824] = 2214$$

And we've seen how the number 2214, like its reversal, is the sum of three triangular 'mountains' (351, 1485, and 378).

351 is the triangular number of 26.

1485 is the triangular number of 54.

378 is the triangular number of 27.

'Let me see if I've understood what you've told us,' says Delia. 'The mountain-range consisting of 780, 2016, and 1326 *reflects itself*, so as to produce the mountain-range consisting of 351, 1485, and 378.'

That's right! Now we're ready to consider the two members of Psalm 49's riddle.

We may take the first member to represent the original unfallen creation. In it we find a holy mountain whose three peaks are built on regular principles. Fifty-one is twelve more than thirty-nine, and sixty-three is twelve more than fifty-one. The peaks are built on three numbers which add up to give the *ne plus ultra* of trinity, 'an hundred and fifty and three'.

(Here is something that every mathematician knows. A number which is evenly divisible by three will end up as 153 if you cube and sum its digits over and over again. Take the number 198. One cubed plus nine cubed plus eight cubed is 1242. One cubed plus two cubed plus four cubed plus two cubed is 81. One cubed plus eight cubed is 513. Five cubed plus one cubed plus three cubed is 153, and further than that you cannot go.)

We may take the second member of the riddle to represent the work of redemption. While the holy mountain (verse 4) is expressed in terms of divine 400 gematria, the work of redemption (verse 5) is expressed in terms of human 22 gematria. Do you see how the Redeemer does his work? He rebuilds the holy mountain of verse 4 by transforming and combining four out of six smallish numbers (U = 32, V = 48, W = 53, and X = 54). I'll print the eight digits which appear in these four numbers on a single line below.

3 2 4 8 5 3 5 4

Look carefully at the second and fourth of the following equations.

$$\text{Peak 1: } [-3 \times 24] + [853 - 5 + 4] = 780$$

$$\text{Peak 2: } [-32 \times 48] + [53 \times 54] = 1326$$

$$\text{Peak 3: } [(3 \times 2) \times (4 + 8)] \times [(5 + 3) + (5 \times 4)] = 2016$$

$$\text{Peaks 1 and 2: } -3248 + 5354 = 2106$$

$$\text{Peaks 1 and 3: } [4^5 \times 3] - [(-5 + 8) \times (4 \times 23)] = 2796$$

$$\text{Peaks 2 and 3: } [4^5 \times 3] + [(58 - 4) (2 + 3)] = 3342$$

$$\text{Peaks 1, 2, and 3: } [4 \times 5] + [3 - 5 + 8 + 4^{(2 \times 3)}] = 4122$$

The Redeemer also rebuilds each of the three *reflected* peaks by transforming and combining the 32485354 digits.

$$\text{Peak 1: } [3^2 + 4] [-8 + (5 \times 3) + (5 \times 4)] = 351$$

$$\text{Peak 2: } 324 - 8 + 5 + 3 + 54 = 378$$

$$\text{Peak 3: } [-3 - 2 + (4 \times 8)] [-5 + (3 \times 5 \times 4)] = 1485$$

$$\text{Peaks 1 and 3: } 3^2 [4 + 8 + (5 \times 3) + 54] = 729$$

$$\text{Peaks 1 and 2: } [32 + 4] \times [(8 \times 5) + (3 \times 5) - 4] = 1836$$

$$\text{Peaks 2 and 3: } [-3 - 2 + (4 \times 8)] \times [(5 \times 3) + 54] = 1863$$

$$\text{Peaks 1, 2, and 3: } [-3 - 2 + 48 - 5 + 3] \times 54 = 2214$$

All six peaks can be formed by using the 32485354 digits.

$$[3 \times 24 \times 8] \times [5 - 3 + 5 + 4] = 6336$$

The three reflected peaks 351, 1485, and 378 are based respectively upon the numbers twenty-six, fifty-four, and twenty-seven. These three base-line numbers add up to 107, which is the 400 gematric value of the Hebrew phrase beth-nun-yodh aleph-daleth-mem (= sons of man).

In 22 gematria the words denoted S to X add up to 260, one less than the total of the words denoted M to R. At first sight the number 260 appears to be 'a little lower than the angels'. But 260 represents the sum of the bases of all six triangles: 39, 51, 63, 26, 27, and 54. 260 is the sum of 153 + 107.

What do the numbers 107 and 153 tell us? That the Redeemer empowers those SONS OF MAN who believe on his name to become the SONS OF GOD.

We become sons and daughters of God AT ONCE by believing on the name of the Lord Jesus Christ. From then on we have two different natures: a lowborn 'son of man' nature, and a highborn 'son of God' nature. Being at war with one another, these two natures resemble in some degree the musical powers of two and three which we talked about in chapter 21. Esther is really addressing *the two natures* in Psalm 49. 3 (verse 2 in English Bibles) when she says

גם-בני אדם גם-בני-איש (= both lowborn and highborn).

LOWBORN interprets the Hebrew 'sons of aleph-daleth-mem', and Highborn interprets the Hebrew 'sons of aleph-yodh-shin'. In 22 gematria aleph-daleth-mem adds up to eighteen, while aleph-yodh-shin adds up to thirty-two.

The 22 gematric value of aleph-daleth-mem is divisible by three, but the 22 gematric value of aleph-yodh-shin is divisible only by two.

Musical 'sons of aleph-daleth-mem' are powers of three. Musical 'sons of aleph-yodh-shin' are powers of two.

Let me go back to a matter which I mentioned in chapter 21.

Start on a string which is 1728 units long, go up seven octaves, come down seven octaves, and you land on 1728.

Start on 1728, go up twelve fifths, come down seven octaves, and you land on 1704.74176.

The difference between our original 1728 and the new horror-baby 1704.74176 is called the PYTHAGOREAN COMMA. We may express the Pythagorean comma as a proportion of the original string-length in any of three ways: as $531441 / 524288$, or as three to the power twelve over two to the power nineteen, or as 1.0136432647705078125.

The Pythagorean comma articulates the TROUBLE that can arise between two great powers: the twelfth power of THREE, and the nineteenth power of TWO. As soon as you attempt to tune a large stringed instrument like the harpsichord, you have to deal with numerical TROUBLE. The trouble is solved after a fashion by means of a give-and-take arrangement called TEMPERAMENT.

As Job said, *The LORD giveth, and the LORD taketh away.*

If you read Psalm 75. 4-7 (AV), you'll see how God tunes or tempers the whole universe. To lift up the horn here (see I Chronicles 25. 5) is to insist on playing one's own untempered note.

I said unto the fools, Deal not foolishly: and to the wicked, Lift not up the horn: Lift not up your horn on high: speak not with a stiff neck. For promotion cometh neither from the east, nor from the west, nor from the south. But God is the judge: he putteth down one, and setteth up another.

Aside from the Pythagorean comma, there are two horror-babies with which tuners have to deal. The SYNTONIC COMMA is the amount by which four 'justly tuned' perfect fifths exceed two octaves and a 'justly tuned' major third. It may be expressed fractionally as $81 / 80$, or decimally as 1.0125. The LESSER DIESIS is the amount by which three 'justly tuned' major thirds exceed one octave. It may be expressed fractionally as $128 / 125$, or decimally as 1.024. Now, then! I don't want to overload chapter 30 with arcane musical detail, so I'm going to speak briefly about only one method of temperament.

The most equitable way of dealing with musical horror-babies is represented by what we call EQUAL TEMPERAMENT. (Here is the subtext of Psalm 137. 9.)

Imagine that we want to tune a seven-octave chromatic psaltery in equal temperament. First we tune the thirteen notes *d, d#, e, f, f#, g, g#, a, a#, b, c', c##, d'* so that neighbouring semitones are logarithmically equidistant from each other. How may we do that? Easy. We use THE TWELFTH ROOT OF TWO, for which David's eight-digit working value was 1.0594632. An equal-tempered psaltery having strings of uniform thickness and tension will sound the thirteen notes *d, d#, e, f, f#, g, g#, a, a#, b, c', c##, d'* on strings having lengths respectively of 864, 816, 770, 727, 686, 647, 611, 577, 545, 514, 485, 458, and 432 units. Compute the string-lengths of the notes between 864 and 432 in the following manner.

To find the length of the *d#* string, divide the length of the *d* string (864) by 1.0594632, and round off the quotient 815.5073248 to the nearest whole number (816).

To find the length of the *e* string, divide the length of the *d#* string (816) by 1.0594632, and round off the quotient 770.2013624 to the nearest whole number (770).

To find the length of the *f* string, divide the length of the *e* string (770) by 1.0594632, and round off the quotient 726.7831483 to the nearest whole number (727).

Keep going in the same manner until you arrive at 432.

Be careful when you divide 686 by 1.0594632 to get the quotient 647.4977139. Don't let anyone tell you that 647.4977139 is closer to 648 than it is to 647. It isn't.

Once we've tuned the twelve strings *d, d#, e, f, f#, g, g#, a, a#, b, c', c##* in equal temperament, we tune all the other strings of the instrument so that in relation to these twelve tuned strings ALL OCTAVES ARE PERFECT OCTAVES.

On the next page you can see a one-octave equal-tempered psaltery which runs in semitones from *d* to *d'*. All thirteen strings have equal thickness and tension.

| | |
|---|----------|
| THE d STRING IS 864 UNITS LONG. | [-----o] |
| THE d# STRING IS 816 UNITS LONG. | [-----o] |
| THE e STRING IS 770 UNITS LONG. | [-----o] |
| THE f STRING IS 727 UNITS LONG. | [-----o] |
| THE f# STRING IS 686 UNITS LONG. | [-----o] |
| THE g STRING IS 647 UNITS LONG. | [-----o] |
| THE g# STRING IS 611 UNITS LONG. | [-----o] |
| THE a STRING IS 577 UNITS LONG. | [-----o] |
| THE a# STRING IS 545 UNITS LONG. | [-----o] |
| THE b STRING IS 514 UNITS LONG. | [-----o] |
| THE c' STRING IS 485 UNITS LONG. | [-----o] |
| THE c#' STRING IS 458 UNITS LONG. | [-----o] |
| THE d' STRING IS 432 UNITS LONG. | [-----o] |

Do you want to do a job on your own? Then read Psalm 60. 14 in Hebrew, study the 400 gematric values of its seven words, and see if you can find all three of the musical horror-babies: the Pythagorean comma, the syntonic comma, and the lesser diesis.

David encoded the last four digits of 1.0594632 in the first two verses of Psalm 18. These two verses add up in 400 gematria to 4632.

למנצח לעבד יהוה לדוד אשר דבר ליהוה
את-דברי השירה הזאת ביום הציל-יהוה
אותו מכף כל-איביו ומיד שאול
ויאמר ארחמך יהוה חזקי

To the chief Musician, A Psalm of David, the servant of the LORD, who spake unto the LORD the words of this song in the day that the LORD delivered him from the hand of all his enemies, and from the hand of Saul: And he said, I will love thee, O LORD, my strength.

4632, the 'tail' of 1.0594632, generates the 'head' 1059 in accordance with the multi-purpose cryptogram of Psalm 68. 26 (verse 25 in English Bibles).

קדמו שרים אחר נגנים בתוך עלמות תופפות

The singers went in front, the instrumentalists came at the rear; in the middle were the drummer-girls.

THE SINGERS WENT IN FRONT denotes the first two digits 4 and 6.

THE INSTRUMENTALISTS CAME AT THE REAR denotes the last two digits 3 and 2.

IN THE MIDDLE WERE THE DRUMMER-GIRLS denotes the middle two digits 6 and 3.

$$[4 + 6] = 10 \quad [3 + 2] = 5 \quad [6 + 3] = 9$$

It would be normal for a reporter to describe first the front of a procession, then the middle, and then the rear: but David, like Herodotus, is not content to be a mere reporter.

Let me repeat that David's working value for the twelfth root of two was 1.0594632. In Psalm 49 Esther encodes this essential number of equal temperament, using a cryptogram which involves only the first and the third words of verse 5, aleph-teth-he and aleph-zayin-nun-yodh. These two words mean respectively 'I shall stretch', and 'my ear'. The intervening word lamedh-mem-shin-lamedh means 'to a parable', and it has a 400 gematric value of 400.

אטה למשל אזני

400 is a square number. Is Esther going to 'stretch' her ear to a square number? And does her act of 'stretching' involve anything more? Is she going to 'stretch' the word which actually *means* I SHALL STRETCH? The word in question, word 1 of verse 5, is spelled aleph-teth-he. It has the value of $[1 + 9 + 5] = 15$ in both 22 and 400 gematria.

Does Esther intend us to 'stretch' the word by expressing it in terms of 406 gematria? It certainly gets a lot bigger if we do so.

$$[\text{aleph} = 111] \quad [\text{teth} = 419] \quad [\text{he} = 6]$$

In 406 gematria the word aleph-teth-he adds up to 536, and that number starts a bell ringing. You recall how we represented the numbers of letters contained by the twelve Hebrew words of Psalm 49's riddle.

| | | |
|-----------|-------|--------------|
| (verse 4) | 2-4-5 | 5-3-6 |
| (verse 5) | 3-4-4 | 4-5-5 |

Something is going on here. The word which adds up to 536 in 406 gematria is preceded by three words which contain respectively five, three, and six letters! We may construe this fact as representing 'the testimony of two witnesses'.

But we haven't really 'stretched' the word aleph-teth-he in accordance with its real meaning. Maybe we're meant to take the word by both ends, as if it was a Christmas cracker, and give it a good pull. What happens if we do that?

Humour me for a moment. We extend the aleph and the he, which happen to be the first two ‘stretchable’ letters, so much as to duplicate them. (The ‘stretchable’ letters of the Hebrew alphabet are the ones which may be extended towards the left by a scribe who needs to justify his left-hand margin.)

[aleph = 111] [aleph = 111] [teth = 419] [he = 6] [he = 6]

The ‘stretched’ version of 536 adds up to 653. Is that big enough, or is there anything more that we can do by way of ‘stretching’? Well, if we multiply 536 by 653, we get 350008. Let’s keep that preposterous number at the back of our minds while we look at word 3 of verse 5, ‘my ear’ (aleph-zayin-nun-yodh).

3 5 0 0 0 8

The 28 gematric value of aleph-teth-he (77) may be thought of as [11 x 7] and then ‘stretched’ by interpretation to give 117, which when added to 536 brings the latter number up to 653.

‘My ear’ adds up to 32 in 22 gematria, and to 68 in 400 gematria.

The second Hebrew word of verse 5 means ‘to a parable’, but we have already wondered whether the 400 gematric value of that word (400) indicates stretching ‘my ear’ so as to make it into a square number.

Well, then! We’ll stretch each of the two gematric values *quadratically*. (The square of 32 is 1024, and the square of 68 is 4624.)

Then we’ll concatenate these square numbers.

1 0 2 4 4 6 2 4

Finally, we’ll add on the product of 536 and 653, the number 350008, which is waiting impatiently to be pressed into service.

10244624
350008
 10594632

All we need is a decimal point. Two Hebrew words from Psalm 49 have given us a good working value for the twelfth root of two.

‘Esther’s riddle is astonishingly comprehensive,’ says Lettuce Girl. ‘Her riddle covers the white-note scale of D, the holy mountain, the mystery of redemption, and equal temperament.’

‘Listen,’ says Delia. ‘In 400 gematria verse 4 adds up to 2106, and verse 5 adds up to 1682.’ She pauses. ‘In 22 gematria verse 4 adds up to 261, and verse 5 adds up to 260.’ Miss Benn looks down at her notebook. ‘The two members of the riddle differ by *four hundred and twenty-four* in 400 gematria, and by *one* in 22 gematria. I’ve been wondering. Is there any way in which the two members may sound a perfect unison, so to speak, by adding up to identical totals?’

Yes, there is! Let us treat the 22 gematric values of the riddle’s twelve words as representing the place values of prime numbers.

We'll put verse 4's prime numbers on the left, and verse 5's prime numbers on the right.

| | |
|---|---|
| The 27 th prime number is 103. | The 15 th prime number is 47. |
| The 36 th prime number is 151. | The 58 th prime number is 271. |
| The 60 th prime number is 281. | The 32 nd prime number is 131. |
| The 42 nd prime number is 181. | The 48 th prime number is 223. |
| The 24 th prime number is 89. | The 53 rd prime number is 241. |
| The 72 nd prime number is 359. | The 54 th prime number is 251. |

Look at what happens when we add up the prime numbers relating to each verse.

$$\begin{array}{rcl}
 103 + 151 + 281 + 181 + 89 + 359 & = & 1164 \\
 47 + 271 + 131 + 223 + 241 + 251 & = & 1164
 \end{array}$$

What is the message of these identical totals? That the Lord Jesus Christ has achieved a perfect reconciliation between God and man at the most fundamental level of existence.

In 406 Hebrew gematria the fourth word of Psalm 49. 5 (אפתא= I will open) adds up to 1016, and in 800 Greek gematria the tenth word of Mark 7. 34 (εφφαθα = Ephphatha: Be opened) adds up to 1016. Note that the first eight dodecagonal 'star' numbers 1, 13, 37, 73, 121, 181, 253, and 337 add up to 1016. In 400 Hebrew gematria the word shin-aleph-wau-lamedh (= hell) adds up to 337. See how much more you can find out about 1016.

'Yes,' says Delia. 'The Lord Jesus has balanced the books of the universe.'

'I never thought before about redemption having a *mathematical* dimension,' you say. 'But then I never knew about the holy mountain until today.'

'Tell me something,' says Rosie. 'Is there anything more to the holy mountain than what we've learned already?'

Oh, yes. What does the holy mountain add up to?

'Four-one-two-two,' replies Rosie.

Correct. Now think back to the panel that you studied in chapter 28.

In the mathematics of ancient Israel,
 486 can denote *e*,
 37 can denote *i*,
 113 can denote *pi*, and
 545 can denote minus one.

We all know the formula which is called Euler's Identity. The number *e* (that is, the base of the natural logarithm), raised to the power of [the square root of minus one multiplied by *pi*], equals minus one.

$$e^{i\pi} = -1$$

Let us now try to express that formula in ancient Hebrew terms. We'll add to 486 the product of 37 and 113, and then *subtract* 545 (first so as to show that it really belongs on the other side of the equation, and secondly so as to let it exercise its innate negativity). In the following equation the four terms which appear on the left side of the equal-sign represent respectively *e*, *i*, *pi*, and minus one.

$$[486 + (37 \times 113)] - 545 = 4122$$

The holy mountain 4122 turns out to constitute a statement of Euler's Identity. (When people get used to the idea, they can start calling it *Esther's Identity*.)

We've already seen how the last word of Psalm 49. 5, whose 400 gematric value is 432.....

חֵידְתִי (cheth-yodh-daleth-tau-yodh)

.....encodes the name of Esther, whose name in Hebrew (aleph-samekh-tau-resh) has a 400 gematric value of 661. [Esther's name has a 22 gematric value of 58.]

$$[6 \times 61] + [66 \times 1] = 432$$

It turns out that the word חֵידְתִי also encodes all four terms of Euler's Identity. חֵידְתִי has 400, 22, 406, and 28 gematric values respectively of 432, 54, 1298, and 146 (the 146 is needed only for 113). These gematric values line up in memorable fashion. Notice that 19 out of 39 digits are used, and that $19 + 39 = 58$.

4 3 2 5 4 1 2 9 8

$$432 + 54 = 486, \text{ the number which represents } e.$$

4 3 2 5 4 1 **2 9 8**

$$29 + 8 = 37, \text{ the number which represents } i.$$

4 3 **2 5 4 1 2** 9 8

$$2 + 541 + 2 = 545, \text{ the number which represents minus one.}$$

4 **3 2 5** 4 1 2 9 **8 1 4** 6

$$3 + 25 + 81 + 4 = 113, \text{ the number which represents } pi.$$

The 486-producing digits come at the very beginning, the 37-producing digits come at the very end, while the 545-producing digits come exactly in the middle, and the 113-producing digits come symmetrically on either side of the middle.

That's enough about Euler's Identity. It remains to ask whether we can find in Scripture a similar statement of the formula for mass-energy equivalence.

Our first job must be to render the terms of that formula into ancient Hebrew.

ENERGY

$$\text{ayin-zayin} = 77 \text{ in } 400 \text{ gematria, and } 23 \text{ in } 22 \text{ gematria}$$

SPEED OF LIGHT

$$\text{he-lamedh-kaph he-aleph-wau-resh} = 267 \text{ in } 400 \text{ gematria, and } 60 \text{ in } 22 \text{ gematria}$$

MASS

$$\text{kaph-beth-wau-daleth} = 32 \text{ in } 400 \text{ gematria, and } 23 \text{ in } 22 \text{ gematria}$$

We can keep the size of any products manageable by working in 22 gematria, but what shall we do with ‘energy’ and ‘mass’, which share the 22 gematric value of 23? Let us avoid ambiguity by using the 400 value of ‘energy’, which is 77, to emphasize the fact of *total* energy (viz both rest energy and kinetic energy). We’ll multiply sixty by sixty to represent speed-of-light-squared, and then we’ll add on twenty-three to represent multiplication by mass. From that total we can *subtract* seventy-seven, by way of showing that energy belongs on the other side of the equation.

$$[(60 \times 60) + 23] - 77 = 3546$$

In 400 gematria Genesis 1. 2 adds up to 3546.

והארץ היתה תהו ובהו וחשך על פני
תהום ורוח אלהים מרחפת על פני המים

And the earth was without form, and void; and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters.

Furthermore, in 22 gematria Genesis 1. 2 adds up to 576. If we interpret 576 as [5 x 76] = 380, we arrive at the 400 gematric value of the Hebrew word for ‘infinity’, mem-samekh-pe-resh. Now infinity is a concept, not a number, but it is relevant to any consideration of mass-energy equivalence. (When an object is moving at high speed, its relativistic mass is greater than the rest mass. As the object’s movement approaches the speed of light, its relativistic mass tends towards infinity.) Anyway! We can use 3546 and 576, the two gematric values of Genesis 1. 2, to help us remember certain facts about mass-energy equivalence. Look at what happens when you add one gematric value to the other.

$$3546 + 576 = 4122$$

4122 is the number of the holy mountain. Does the holy mountain express both Euler’s Identity and the formula for mass-energy equivalence?

‘Yes, because the holy mountain is *multi-purpose*.’ Delia has opened her Hebrew Bible. ‘What’s the problem with that? The context of Genesis 1. 2 is creatorial. But look at verse 4 of Psalm 49.’ She inhales slowly. ‘The first word has a value of 90 in 400 gematria, and a value of 27 in 22 gematria. Those two values add up to 117, which may be interpreted as 11 x 7, or 77. There you have *energy*.’ Miss Benn pauses. ‘In 400 gematria the second word of the verse has a value of 216, or 36 x 2 x 3, which may be interpreted as 3623. There you have *mass*, multiplied by *speed-of-light-squared*.’ She smiles. ‘Let’s stop for a break.’

THE HOLY MOUNTAIN WAS THERE AT THE BEGINNING

It is exhilarating to discover that the holy mountain 4122 is encrypted in Genesis 1. 1. The verse’s seven Hebrew words have 400 gematric values of 913, 203, 86, 401, 395, 407, and 296, so the seven gematric values employ a total of twenty digits. Set out the last nine digits 395407296 in groups containing FOUR, ONE, TWO, and TWO digits. Then add up the four groups.

$$3954 + 0 + 72 + 96 = 4122$$

Four mathematical panels and a wickedly concentrated *entr'acte* separate us from chapter 31. The first panel is easy to understand.....

PRIMORDIAL 153 (= THE TRIPARTITE 'BASE-LINE' OF 4122)

You won't be surprised to learn that the number 153 appears in Genesis 1. 1.

בראשית ברא אלהים את השמים ואת הארץ

We find the encrypted 153 by numerating only the letters which the author has chosen to employ. Here's what I mean. Genesis 1. 1 involves the eleven Hebrew letters aleph, beth, he, wau, yodh, lamedh, mem, tzaddi, resh, shin, and tau, to which we assign values as follows.

aleph = 1, beth = 2, he = 3, wau = 4, yodh = 5, lamedh = 6,
mem = 7, tzaddi = 8, resh = 9, shin = 10, tau = 11

When words one to seven of Genesis 1. 1 are numerated in terms of these values, they add up respectively to 38, 12, 22, 12, 32, 16, and 21.

$$38 + 12 + 22 + 12 + 32 + 16 + 21 = 153$$

....but the second and third panels should be passed over by timorous readers.

WAR IN HEAVEN: THE DREAM OF A MUSICAL PHYSICIST

Seven musical notes add up to give the number 4122.

$$[972 c + 486 c'] + [864 d + 432 d' + 216 d''] + [768 e + 384 e'] = 4122$$

Three musical notes add up to give the number 666.

$$[288 a' + 216 d'' + 162 g'] = 666$$

On a certain day the number 4122 is attacked, and apparently diminished, by a hostile form of the number 666. At once the note D (two octaves below 864 *d*) is sounded by a string having a notional unitary length of 3456.

$$4122 - 666 = 3456$$

Four musical notes add up to give the number 1631.

$$[768 e + 512 b + 243 c'' + 108 d'''] = 1631$$

Before long the note D is attacked, and apparently diminished, by a hostile leviathan (lamedh-wau-yodh-tau-nun in 400 gematria = 496, or 16 x 31, interpreted as 1631).

$$3456 - 1631 = 1825$$

The number 1825 arranges itself first as the stellate number of twenty-five, and then as a quintet of three-dimensional figurate numbers: 1, 33, 173, 505, and 1113. When the note D sounds once again it turns the number 1825 by reversal into what we call the 'centred decagonal number' of thirty-three.

$$3456 + 1825 = 5281$$

Try to remember the number 5281, which will appear in chapter 32.

WHAT HAPPENS IN THE FIRST THREE VERSES OF THE BIBLE

Words one to seven of Genesis 1. 1 have 400 gematric values respectively of 913, 203, 86, 401, 395, 407, and 296.

בראשית ברא אלהים את השמים ואת הארץ

The verse has both a general sense and a particular sense. Here's the general sense.

In the beginning God created the heavens and the earth.

Here's the particular sense. ('Notation' = an *in situ* blueprint which may be brought to life.)

God began by creating the notation of the heavens and the notation of the earth.

Words one to fourteen of Genesis 1. 2 have 400 gematric values respectively of 302, 420, 411, 19, 334, 100, 140, 451, 220, 86, 728, 100, 140, and 95.

והארץ היתה תהו ובהו וחשך על פני תהום ורוח אלהים מרחפת על פני המים

The verse's three parts (*a*, *b*, and *c*) should be understood as follows.

Part a (And the earth was *tohu*, and *bohu*): gematric value 1152

At the sound of the note *A* (unitary string-length 1152), the earth began to consist of a proleptic entity corresponding to element number one, viz hydrogen. When the note *A* gave way to the octave *e-e'* (unitary string-lengths 768-384), a proportion of the soon-to-be element number one was transformed into its own octave, soon-to-be element number eight, viz oxygen. Read II Peter 3. 5.

Part b (and darkness was upon the face of the deep): gematric value 1025

1025 = [359 (= Satan) + 666], and 1025 also = [729 (the note *f*) + 296 (= the earth)]

In 400 Hebrew gematria שטן (= Satan) adds up to 359, and הארץ (= the earth) adds up to 296. As they pressed down upon the two soon-to-be elements, the powers of darkness sounded the note *f* (unitary string-length 729). Taking account of the hostile pressure, God brought into being a proleptic entity corresponding to element number six, viz carbon. (The carbon-12 atom has *six* electrons, *six* protons, and *six* neutrons.) A parallel is furnished by Aaron's rod-snake, which absorbed the rod-snakes of the Egyptian magicians in Exodus 7. 12, and went on to bear fruit in Numbers 17. 8. Read Judges 14. 14 and Psalm 74. 14 in the AV. Then remind yourself that in 400 gematria הבל (= *i*) adds up to 37.

Part c (and the Spirit of God moved upon the face of the waters): gematric value 1369

1369 is 37^2 . In the presence of 2.718, viz the number *e* ($1369 - 1025 = 4 \times 86$, and $486 = 27 \times 18$), the Spirit of God inaudibly produced negative unity by squaring *i*.

Words one to six of Genesis 1. 3 have 400 gematric values respectively of 257, 86, 25, 207, 31, and 207 (total 813). 813 is by interpretation $81^3 = 531441$ = the unitary string-length of the note *C* flat, a lion's roar of unimaginably low pitch.

ויאמר אלהים יהי אור ויהי אור

Light FULLY REALIZED THE NOTATION of the earth by converting the three proleptic entities into 111 elements which God would distinctly associate with light, and 111 anti-elements which he would distinctly associate with darkness.

In parts *a* and *b* of Genesis 1. 2 we can identify proleptic entities corresponding to the three elements that make up sugar: hydrogen, oxygen, and carbon. When you've worked your way through chapter 32 you may wonder if the *tohu*, *bohu*, and darkness of Genesis 1. 2 encompass not only the three basic particles of the atom, but also matter, antimatter, and what is presently called dark matter. You may even go on to see extra meanings in 'the deep' and 'the waters'.

The fact that Rahab the dragon appears twice in Genesis 1. 2 within a group of THIRTY-SEVEN Hebrew characters.....

והארץ היתה תהו ובהו וחשך על פני תהום ורוח אלהים מרחפת על פני המים

.....tells us that Rahab, whose 400 gematric value is 207, is related to הבל (= *i*). We may construe Genesis 1. 1's phrase ואת הארץ (= and the notation of the earth) as involving two dragons: the leviathan of the anti-elements (לוייתן), whose 400 gematric value is 496, and the Rahab who is related to *i*. In 400 gematria ואת הארץ adds up to 703 (= 496 + 207).

WHAT HAPPENS IN THE THREE STANZAS OF A SHORT POEM

On page 338 you saw the vespertilian poem which Jane Dascey wrote one night.

Are we all born to invest
In the quivering dive of a gold-mine?

I burn a warmer lamp;
I support a chapel bell.

I'm a yodeller, too:
I sing brave harmony.

Did you observe that the poem contained a notable sequence of equidistant letters? If you start on the B of BORN and read every nineteenth letter, you'll be able to spell the palindromic number BIIIB.

AREWEALL **B** ORNTOINVES
TINTHEQU **I** VERINGDIVE
OFAGOLDM **I** NEIBURNAWA
RMERLAMP **I** SUPPORTACH
APELBELL **I** MAYODELLER
TOOISING **B** RAVEHARMONY

The number which is written BIIIB in base 19 is written 29713180 in base 10. Lettuce Girl's poem is not inspired, but the number 29713180 encapsulates a certain amount of Biblical information. In 400 Hebrew gematria Genesis 1. 1 (בראשית ברא אלהים את השמים ואת הארץ) adds up to 2701, while the first member of Genesis 1. 2 (והארץ היתה תהו ובהו) adds up to 1152, and the third member of Genesis 1. 2 (ורוח אלהים מרחפת על פני המים) adds up to 1369. Furthermore, the twelfth root of two has an eight-digit value of 1.0594631. Look at the equation which follows.

$$[2701 + 1152 + 1369] \times [1059 + 4631] = 29713180$$

Does the palindrome BIIIB represent an accident of literary creation? Well, it is a historical fact that Jane's stepfather has encouraged her both to forsake God and to invest her money recklessly. When Lettuce Girl was fashioning the text and the subtext of her poem, she responded to that ugly fact. Jane happens to hold a degree in mathematics, and she has been travelling on the gematric road for more than a year. It therefore pleased Miss Dascey to compose a 28-digit equation which contains a noticeable piece of mirror imaging.

2701 1 152 1 369 10594 631 297 1 3180

Lettuce Girl construed each set of mirror-image digits as 12136, which is the 800 Greek gematric value of Romans 10. 8.

αλλα τι λεγει εγγυς σου το ρημα εστιν εν τω στοματι σου και εν τη καρδια σου τουτ εστιν το ρημα της πιστεως ο κηρυσσομεν.

But what saith it? The word is nigh thee, even in thy mouth, and in thy heart: that is, the word of faith, which we preach.....

All things work together for good to them that love God. Not merely their circumstances. All things! All their fellow-creatures, including letters and numbers. Here is a true saying. If a diligent Christian man desireth the office of an author, he desireth an exciting job. The same goeth for a diligent Christian woman.

ENTR'ACTE: THE HANDS OF DAVID

Langs Skjæret sidder Skarven svart paa Rad og kiger efter Seien.

Men der var en Tid, da en akkurat havde Tal paa dem. Der blev aldrig hverken flere eller færre end tolv, og paa en Sten ude i Sjørøgen sad den trettende.....

Along the rocks the cormorants sit in a black row and wait for dogfish.

But there was a time when people knew their exact number. There were always twelve of them, neither more nor less, and the thirteenth one sat on a stone, out in the sea-mist.....

Jonas Lie, 'The Cormorants of Andvær'

A great Norwegian author leads us back to the matter of equal temperament. If the thirteen strings of your harp sound the notes d $d\#$ e $f\#$ g $g\#$ a $a\#$ b c' $c\#'$ d' , if those thirteen strings have uniform thickness and tension, if the bottom d string has a unitary length of 864, if the top d' string has a unitary length of 432, and if all the intermediate notes are tuned in equal temperament, then the thirteen semitones of the chromatic scale will be produced by thirteen strings having unitary lengths as follows.

| | | | | | |
|--------|---|-----|-------|---|-----|
| d | = | 864 | | | |
| $d\#$ | = | 816 | e | = | 770 |
| f | = | 727 | $f\#$ | = | 686 |
| g | = | 647 | $g\#$ | = | 611 |
| a | = | 577 | $a\#$ | = | 545 |
| b | = | 514 | c' | = | 485 |
| $c\#'$ | = | 458 | d' | = | 432 |

Is there an easy way to remember all these string-lengths? Yes, there is. Look at the differences between consecutive numbers.

| | | | |
|---------------|----|---------------|----|
| $864 - 816 =$ | 48 | $816 - 770 =$ | 46 |
| $770 - 727 =$ | 43 | $727 - 686 =$ | 41 |
| $686 - 647 =$ | 39 | $647 - 611 =$ | 36 |
| $611 - 577 =$ | 34 | $577 - 545 =$ | 32 |
| $545 - 514 =$ | 31 | $514 - 485 =$ | 29 |
| $485 - 458 =$ | 27 | $458 - 432 =$ | 26 |

Let me set out the twelve differences 'in a black row'.

48 46 43 41 39 36 34 32 31 29 27 26

(Any tuner who looks at that black row will be moved to declare one great truth of his trade. A TEMPERAMENT IS NOT A SET OF NUMBERS, BUT A SHAPE.)

Now look at *the differences between the differences*.

- | | | | | |
|--------------------|----------|----------|--------------------|-------------------|
| 01. 48 – 46 | = | 2 | | |
| 02. 46 – 43 | = | 3 | 03. 43 – 41 | = 2 |
| 04. 41 – 39 | = | 2 | 05. 39 – 36 | = 3 |
| 06. 36 – 34 | = | 2 | 07. 34 – 32 | = 2 |
| 08. 32 – 31 | = | 1 | 09. 31 – 29 | = 2 |
| 10. 29 – 27 | = | 2 | 11. 27 – 26 | = 1 |

Here are the eleven differences-between-the-differences, set out on one line.

2 3 2 2 3 2 2 1 2 2 1

These eleven numbers arrange themselves into two sets of five and a medial ‘fulcrum’ which happens to be 2.

2---3---2---2---3 2 2---1---2---2---1

We can express each number in twoish terms as [2], or as [2 + 1], or as [2 – 1].

[2] [2 + 1] [2] [2] [2 + 1] [2] [2] [2 – 1] [2] [2] [2 – 1]

Before we move down a font, notice that the eleven numbers add up to TWENTY-TWO. That fact may appeal to any author whose alphabet contains 22 letters.

Let the medial fulcrum of [2] stand for the tuner’s two-eared head.

The two five-number groups may then stand for the tuner’s two hands.

Each of these hands should be ‘read’ from left to right so as to give thumb, first finger, second finger, third finger, and fourth finger.

Now notice something. Every number is a [2], apart from the second and fifth digits of each hand, or (as we may so say) apart from the first and fourth FINGERS of each hand.

Hold your hands up in front of your face so that both thumbs are pointing to the left.

Bend the second and third fingers of your left hand palmwards, and then bend your left thumb over so as to hold them down. Repeat the process with your right hand.

Let the first and fourth fingers of each hand point upwards.

Now point down to the floor with your left hand, and point up to the ceiling with your right hand. ‘Down’ will mean *subtract*, and ‘up’ will mean *add*. What are you saying with your strange piece of semaphore?

That when you have thirteen strings tuned in equal temperament THE DIFFERENCES BETWEEN THE DIFFERENCES BETWEEN THE UNITARY STRING-LENGTHS are all twos, apart from the second, fifth, eighth and eleventh numbers.

With your right hand you ‘give’, so as to make the eighth and eleventh numbers threes rather than twos.

(Your two-eared head represents the sixth or medial number, which is a two.)

With your left hand you ‘take away’, so as to make the second and fifth numbers ones rather than twos.

Anyone who watches you will notice only that you are pointing in some manner with the FIRST and FOURTH fingers of each hand.

ONE and FOUR by interpretation give the number FOURTEEN, which is the gematric value of 'David' (דוד: daleth-wau-daleth) in both 22 and 400 gematria.

By saying 'DAVID' with two fingers of each hand, you are precisely encoding the unitary string-lengths of equal temperament.

Around 1025 AD a mnemonical hand was devised by Guido of Arezzo. We find a similar kind of thing in II Chronicles 23. 18. Young's Literal Translation renders the last three Hebrew words of that verse thus: BY THE HANDS OF DAVID. No fumbling, no fudge!

Jehoiada putteth the offices of the house of Jehovah into the hand of the priests the Levites whom David had apportioned over the house of Jehovah, to cause to ascend the burnt-offerings of Jehovah, as written in the law of Moses, with joy, and with singing, BY THE HANDS OF DAVID (= על ידי דויד).

The Chronicler is referring to David's system of equal temperament. In both 400 and 22 gematria, the Hebrew word for 'hand' (יד: yodh-daleth), like the Hebrew name of 'David' in its normal spelling (daleth-wau-daleth), adds up to fourteen. Furthermore, in 22 gematria the phrase על ידי דוד (= by the hands of David) adds up to 66, but the extra yodh which comes as third letter in the Chronicler's spelling of דויד (= David) brings the phrase's total value up to 76. By adding this yodh, the Chronicler contrives to encode all eight unitary string-lengths of the equal-tempered scale *d e f g a b c' d'* in terms of their total. Here's what I mean. When we multiply the 22 gematric value of the actual phrase על ידי דויד by the 22 gematric value of the normal phrase על ידי דוד, we get 5016.

$$[76 \times 66] = 5016 = [864 + 770 + 727 + 647 + 577 + 514 + 485 + 432]$$

Now consider לויתן (= leviathan, whose 400 gematric value is 496). Leviathan is among other things THE DRAGON OF EQUAL TEMPERAMENT. Take the eleven equal-tempered string-lengths 816, 770, 727, 686, 647, 611, 577, 545, 514, 485, and 458, along with the eight untempered string-lengths 864, 768, 729, 648, 576, 512, 486, and 432. You'll find yourself looking at a collection of nineteen three-digit numbers. Arrange the nineteen numbers 864, 816, 770, 768, 729, 727, 686, 648, 647, 611, 577, 576, 545, 514, 512, 486, 485, 458, and 432 in descending order of magnitude so as to form a hexagon of nineteen. The [1 + 18] numbers are arranged in a figure of [5 + 1] sides, and they add up to 11851.

[01] 864 [02] 816 [03] 770

[04] 768 [05] 729 [06] 727 [07] 686

[08] 648 [09] 647 [10] 611 [11] 577 [12] 576

[13] 545 [14] 514 [15] 512 [16] 486

[17] 485 [18] 458 [19] 432

Draw five lines of tiny circles on a large piece of white card so as to make a hexagon like the one which appears on the left below. Leave exactly three inches of space between neighbouring circles, and leave exactly three inches of space between neighbouring lines of circles. Number the tiny circles very lightly in pencil, copying the nineteen note-numbers from the hexagon which appears on the right below.



Here beginneth another art project. Take a black pen for drawing lines, a ruler, a red crayon, and a blue crayon. Draw a straight line connecting 01, 04, and 08. Connect 01 and 05. Connect 05 and 08. Draw a straight line connecting 12, 16, and 19. Connect 15 and 19. Connect 12 and 15. Now you have two triangles which represent the dragon's wings. Shade each of these triangular wings in red. Notice how the two wings, which are mirror-images of each other, embrace only the eight untempered note-numbers.

Go on to create the decagon whose vertices are 01, 03, 07, 11, 14, 19, 17, 13, 09, and 06. (Draw a straight line connecting 01, 02, and 03. Connect 03 and 07. Connect 07 and 11. Connect 11 and 14. Connect 14 and 19. Draw a straight line connecting 19, 18, and 17. Connect 17 and 13. Connect 13 and 09. Connect 09 and 06. Connect 06 and 01.) This decagon represents the dragon's body. Shade the body in blue. Notice how the body embraces all the equal-tempered note-numbers. Notice also how it is connected to the wings only by the numbers of the untempered upper and lower tonic notes, *d* and *d'*.

Create two white mirror-image hexagons by connecting first 07 and 12, then 08 and 13. One hexagon's vertices are 01, 05, 08, 13, 09, and 06. The other hexagon's vertices are 07, 11, 14, 19, 15, and 12. Each hexagon represents a retractable or detachable neck-and-head section of the dragon. TWO heads, sez you? Yes! Read Psalm 74. 14 (AV).

Thou brakest the heads of leviathan in pieces, and gavest him to be meat to the people inhabiting the wilderness.

Then, bearing in mind the legendary fate of the Gordian knot, turn to Isaiah 51. 9.

Awake, awake, put on strength, O arm of the LORD; awake, as in the ancient days, in the generations of old. Art thou not it that hath cut Rahab, and wounded the dragon?

In 400 gematria the word המחצבת (= that hath cut) adds up to 545 (= equal-tempered *a*#), while the word מחוללת (= wounded) adds up to 514 (= equal-tempered *b*). The sum of 545 and 514 is 1059, and 1059 is the 'head' of the twelfth root of two, 1.0594631.

Facts relating to equal temperament are concealed in various numbers. 2016, the largest peak of the holy mountain, encodes [(10 x 59) + (46 x 31)]. 1059 + 4631 = 5690, which in base 14 is 2016. 2016 - 1059 = 957, or base 10 11851 written in base 36 notation. What is 11851? It is the sum of the nineteen unitary string-lengths that make up the hexagon of page 645. Remember: the [1 + 18] numbers are arranged in a figure of [5 + 1] sides, and they add up to 11851. In 800 Greek gematria Hebrews 11. 13, whose fifteenth word has a value of 864, adds up to 11851. Study that verse for yourself.

Leviathan (לוייתן = 496 in 400 gematria) is a Protean beast. First, 4 + 9 + 6 = 19. Secondly, 496 = 8 x 62, and 862 = 11 + 851. Thirdly (here's a connection with the circle, and therefore with the hexagon), 496 = 31 x 4². No more! If you like, you can cut out the five polygons that make up your dragon, and assemble them to make a stylized ballerina.

IS JOB THE HEXAGON OF NINETEEN COUNTERS?

Aaron's rod wraps up serpents. A harper and organist called Job wraps up the dragon called leviathan. Notice that while the Hebrew name of Job (איוב: aleph-yodh-wau-beth) adds up to nineteen in both 400 and 22 gematria, the last verse of Job's book (42. 17) contains nineteen Hebrew letters.

וימת איוב זקן ושבע ימים *So Job died, being old and full of days.*

Is that it? Does the man who foretells his own resurrection in Job 19. 25-27 cease to exist when he dies? No. The 400 gematric value of Job 42. 17 is 1110, and in base 19 (the Jobian base, as we might say), base 10 1110 is 318. What is 318? It is the 400 gematric value of the Hebrew word ישוב (yodh-shin-wau-beth = he will return). You recall what Leslie Charteris used to put at the end of his Simon Templar novels.



Watch for the sign of The Saint, he will be back.

In like manner the personalized mathematical cryptogram of Job 42. 17 says, *He will be back*. The thirty-seven English letters which Leslie Charteris employs.....

W A T C
H F O R T
H E S I G N
O F T H E S A
I N T H E W
I L L B E
B A C K

.....may be arranged to form a hexagon, and so may the nineteen letters of Job 42. 17.

ו י מ
ו י א ת
ו ז ק נ ו
ש ב ע י
מ י ם

Now look at Job 1. 1, whose 400 gematric value is 3349. [3349 – (33 x 49) = 1732.]

איש היה בארץ עוץ איוב שמו והיה האיש ההוא תם וישר וירא אלהים וסר מרע

There was a man in the land of Uz, whose name was Job; and that man was perfect and upright, and one that feared God, and eschewed evil.

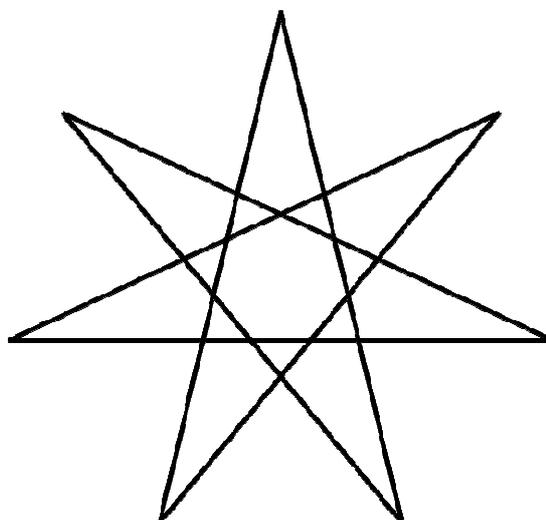
Allow the number 1631 to represent leviathan, 'the dragon of equal temperament' (לוייתן = 16 x 31). When you subtract 1631 from 3349, you are left with 1718, or by interpretation with the pragmatic luthier's fraction: *seventeen-eighteenths*.

| | | |
|-----------------------|------------------------------|-----------------------|
| 864 x 17/18 = 816.000 | 816 x 17/18 = 770.667 | 770 x 17/18 = 727.222 |
| 727 x 17/18 = 686.611 | 686 x 17/18 = 647.889 | 647 x 17/18 = 611.056 |
| 611 x 17/18 = 577.056 | 577 x 17/18 = <u>544.944</u> | 545 x 17/18 = 514.722 |
| 514 x 17/18 = 485.444 | 485 x 17/18 = 458.056 | 458 x 17/18 = 432.556 |

You can use 1732 as a mnemonic. 17 x 32 = 544, but 1732 – [the reversal of 173 x 2] = 544 + 545. Bring 544.944 up to 545 by adding on the only mantissa which appears three times (0.056). Then forget about mantissas, and you've got equal temperament.

THE CENTRAL MUSIC OF THE PLEIADES

Could David have based a piece of humorous gematria on the Pleiadean heptagram of CBS 1766? 'Yes, of course,' replies Greta. 'Sargon II based one of his building projects on the number 16283, which was the gematric value of his own name.'



319, the 400 gematric value of Sargon's Hebrew name סרגון, encodes the pentatonic scale (see page 270). For its part the heptagram of CBS 1766 comprises one central heptagon, seven triangles, and seven quadrilaterals. In 400 Hebrew gematria the word אחד (= one) has a value of 13, the letter aleph has a value of 1, the letter-name of aleph (אלף) has a value of 111, and the word בתוך (= in the centre) has a value of 428. David might have imagined himself moving from the ONE central heptagon through the SEVEN triangles and SEVEN quadrilaterals before taking away the ALEPH or ONE heptagon which is found IN THE CENTRE. He might then have written an equation.

$$[13 \times 7^7] - 111428 = 10594631$$

Furthermore, David could have hidden the unitary string-lengths 864, 816, 770, 727, 686, 647, 611, 577, 545, 514, 485, 458, and 432 in an add-and-subtract Hebrew riddle whose seven words would yield fourteen gematric values. By setting one riddle-word beside each of the heptagram's seven points, and by enclosing the heptagram in a DOUBLE circle, he could declare obliquely that each of the seven riddle-words was to be construed in terms of TWO numerical alphabets. The last seven words of Psalm 68's eight-word verse 24 (= verse 23 in the AV) would have served David's purpose very well. He could have written the first word למען in the central heptagon.

למען תמחץ רגלך בדם לשון כלביך מאיבים מנהו

That thy foot may be dipped in the blood of thine enemies, and the tongue of thy dogs in the same.

400 gematric values: 190 538 253 46 386 82 103 101

22 gematric values: 55 61 46 19 53 46 49 38

Psalm 68. 24 happens to have vocabular links not only with Exodus 11. 7 (למען, כלב, and לשנו), but also with the heptagram-text of CBS 1766 (*damu* = 'blood', and *kalbanu* = 'pack of dogs'). If you're interested in the heptagram, study it for yourself. Start by wrestling with the LANGUAGE. Be careful to treat CBS 1766 as a piece of LITERATURE. Ignore any scholar who treats it otherwise. **Add and subtract the gematric values of Psalm 68. 24's first seven words to get the thirteen unitary string-lengths.** (I'll do the easy ones for you. $432 = 46 + 386$, $458 = 386 + 19 + 53$, $485 = 538 - 53$, $514 = 46 + 386 + 82$, and $545 = 538 + 53 - 46$.) Notice that in $[406 + 28]$ gematria, למען = 539 = 111 + 428.

CANST THOU BIND THE SWEET INFLUENCE OF PLEIADES?

One halfway-house form of temperament creates a particular dissonant fifth which is called 'the wolf' because it sounds like a wolfish howl. Foxes and dogs howl. In the AV, Song of Solomon 2. 15 (אחזו לנו שועלים שועלים קטנים מחבלים כרמים וכרמינו סמדר) is rendered *Take us the foxes, the little foxes, that spoil the vines: for our vines have tender grapes*. The Hebrew words rendered *Take* (אחזו), *us* (לנו), and *the foxes* (שועלים) add up in 400 gematria respectively to 22, 86, and 456. In 22 gematria the word rendered *the foxes* (שועלים) adds up to 78. The fact that the twice-used word שועלים is inarticulate warns us to look for a cryptogram, while the fact that שועלים (= the foxes) is followed by שועלים קטנים (= the *little foxes*) tells us to numerate the word שועלים in terms of both 400 and 22 (*little*) gematria. Well, now! שועלים adds up to 456 in 400 gematria, and to 78 in 22 gematria. The sum of 456 and 78 is 534, which may be interpreted as $[5 \times 3^4]$, viz 405. Notice how the wolf fifth is encoded in the following equation, and then notice what a big player the number 86 (= לבו) turns out to be.

$$[22 \times 86 \times 78] + [(456 + 78) = 534 \text{ interpreted as } (5 \times 3^4) = 405] = 147981$$

The ratio of the wolf fifth is $262144 / 177147$, or $8^6 / 3^{11}$, or 1.47981. $8^6 = 262144$, and 177147 is 3^{11} . Furthermore, $86 = [2 \times 43]$, and $[243 + \text{the reversal of } 86] = 311$.

Equal temperament banishes lupine or vulpine fifths. The 400 gematric values of two words (אחזו and שועלים) may be manipulated so as to generate the twelfth root of two.

$$[456 \times 456 \times (45 + 6)] - [456 \times 22] - [(45 + 6) + 22] = 10594631$$

Let's move on. What is the subtext of the promise that God makes in Exodus 11. 7?

But against any of the children of Israel shall not a dog (כלב) move his tongue (לשנו), against man or beast: that (למען) ye may know how that the LORD doth put a difference between the Egyptians and Israel.

The word לשנו (= his tongue) makes a simple reading of the promise impossible. Even if the *dog* represents whatever evil power is worshipped under the name of Anubis, why might the dog *move his tongue*, rather than *bare his teeth*? Does the word לשנו connote canine *language* (= howling)? Does the LORD mean that no discordant note will affect his historical harmony when he brings Israel out of Egypt?

The dog and its tongue lead us back to Psalm 68. 24, and to the phrase לשון כלביך.

למען תמחץ רגלך בדם לשון כלביך מאיבים מנהו

We may construe the verse as follows. *God's purpose is that (למען) as you wade (רגלך) over your victims (בדם) you will annihilate (תמחץ) the growling of (לשון) the dogs that trouble you (כלביך), whose dissonant fifth interval (מנהו plus ה = 5) arises from inimical strings (מאיבים).* David's language is taut and complex. For some reason the sonic richness of Psalm 68. 24 reminds me of Vergil, *Aeneid* V. 826 (*Nisae Spioque Thaliaque Cymodoceque*), which apart from its triple use of *-que* (= and) consists entirely of proper nouns. If we didn't know that Nisae, Spio, Thalia, and Cymodoce were proper nouns, we should find Vergil's line very hard to translate. The same goes for Joshua 15. 33 (בשפלה אשתאול וצרעה ואשנה) = And in the valley, Eshtaol, and Zoreah, and Ashnah). That verse happens to have a 400 gematric value of 1888.

So does the following Hebrew riddle, which may be rendered *In his marching [you discern] a land, a law, and even the lyres of a place which does not [yet] exist*. Sounds as if it comes from *The Prophecies of Merlin*, I know, but the subtext.....

ארץ תורה גם מני כן אשר לא ברגלו

.....is Aries, Taurus, Gemini, Cancer, Leo, Virgo. I'm sorry for writing an awful riddle.

LIKE A SWARM OF FIRE-FLIES TANGLED IN A SILVER BRAID

Whether or not the individual Akkadian names of the Seven Sisters are inscribed in the heptagram-text of CBS 1766, there does appear to be an astronomical subtext in Psalm 68. 24. Greta has discovered that the Hebrew word כימה (= the Pleiades) is spelled by four equidistant letters (24-27-30-33, underlined below).

למען תמחץ רגלך בדם לשון כלביך מאיבים מנהו

לביך (= thy dogs) reminds me that in Greenlandic *Qiluttuusat* (= the Pleiades) means 'the howling dogs', and that in a famous Cheyenne myth the Pleiades begin life as seven dogs.

The equidistant letters 15-18-21 (underlined below) spell מול (*mul*).

למען תמחץ רגלך בדם לשון כלביך מאיבים מנהו

So do the equidistant letters 25-18-11 (underlined below).

למען תמחץ רגלך בדם לשון כלביך מאיבים מנהו

Mulmul (𐎢𐎣 𐎢𐎣 = star of stars) is Akkadian for *the Pleiades*. You can see that the eighteenth letter wau (ו) is the central member of each three-letter group.

The same two-syllable Akkadian word is encrypted in Judges 5. 20.

מן שמים נלחמו הכוכבים ממסלותם נלחמו עם סיסרא

They fought from heaven; the stars in their courses fought against Sisera.

The equidistant letters 20-14-8 (underlined below) spell מול (*mul*).

מן שמים נלחמו הכוכבים ממסלותם נלחמו עם סיסרא

So do the equidistant letters 1-14-27 (underlined below).

מן שמים נלחמו הכוכבים ממסלותם נלחמו עם סיסרא

You can see that the fourteenth letter wau (ו) is the central member of each three-letter group. Why should the Pleiades appear in the subtext of a song? Here's a better question. Why did our Creator set the Pleiades in the heavens? God created everything for a purpose, and he wants us to look for his purpose in everything. The Biblical authors know that certain heavenly bodies may relate both to the defeat of a cruel enemy, and to the tuning of a complex instrument. Thus in Song of Solomon 2. 15 we find five *mul*s (letters 13-9-5, 13-15-17, 19-15-11, 25-15-5, and 44-36-28).

אחזו לנו שועלים שועלים קטנים מחבלים כרמים וכרמינו סמדר

The eleven letters which spell the *mul*s add up in 400 gematria to 298, and the fifteen *mul*-numbers add up to 270. In 400 gematria the names of the letters which spell כימה and מולמול, using [11 + 15] characters, add up to 568.

ל ו ל + 13 9 5 13 15 17 19 15 11 25 15 5 44 36 28 = 298 + 270 = 568

למד וו מים למד וו מים + הא מים יוד כף = 568

(Seven *mul*s altogether!) Let me conclude by asking seven questions. Would it be easier for us to accept CBS 1766 as a musical document if it depicted a harp instead of a star? Were ancient musicians content to employ forms of temperament that didn't work? How many of the Biblical wolves are musical? Are the Hebrew names of the Seven Sisters inscribed in Psalm 68. 24? How do the Pleiades relate to equal temperament? Do the Pleiades constitute a celestial tuning instrument? And do the seven ecclesial stars of Revelation 1. 16 relate in any way to the literal Pleiades?

CHAPTER 31: WHERE IS THE DISPUTER?

Two interesting characteristics distinguished Leonard Blorengé, Chairman of French Literature and Language; he disliked Literature and he had no French.

Vladimir Nabokov, *Pnin*

Do tell! When may we hope to make men of sense out of the pundits,
Born and brought up with their snouts deep down in the mud of the Frog-pond?

Edgar Allan Poe, 'The Poetic Principle'

借 問 蜉 蝻 輩
寧 知 龜 鶴 年

You waspish would-be scholars with your mayfly-lives:
Are you content to know the age of a crane or a turtle?

Guo Pu

(A certain Oasis song begins *I'M FREE*. Well, I'm not! Not any more. I'm tired of being exploited. Many people pay their architect and their builder and their carpenter, but they expect their linguist to work for nothing. Today I make a resolution that I should have made twenty-five years ago. *I am never again going to translate anything without pay, from or into any language, for anyone, ever.* Trusting that this announcement, as they say, will be accepted by all.)

And now, gentle reader, be warned. A dithyrambic corybant is planning to drop you into the oneiric crucible of language. Check your girths, and get ready for a furious ride. *They say there will be a great round-up*, as an old cowboy sang long ago. Amid the swirling dust I discern a number of my friends, and a number of less genial persons. Let me dream, like Propertius, and record what I see.

You walk into a room and find four books lying on the table. All four of them are written in English, which is your native language.

The first book is concerned with quantum gravity, and you're happy to admit that you can't understand very much of it, because in the realm of theoretical physics **YOU ARE A COMPLETE LAYMAN.**

The second book is concerned with the chromaticism of Alessandro Grandi, and you're happy to admit that you can't understand very much of it, because in the realm of early baroque music **YOU ARE A COMPLETE LAYMAN.**

The third book is concerned with uraniferous granites, and you're happy to admit that you can't understand very much of it, because in the realm of petrology **YOU ARE A COMPLETE LAYMAN.**

The fourth book is concerned with the Criminal Nerve of Grassi, and you're happy to admit that you can't understand very much of it, because in the realm of old-fashioned gastroenterology **YOU ARE A COMPLETE LAYMAN.**

All four books are written in English, and English is your native language.

But you approach these books as A QUADRUPLE LAYMAN.

‘Hold on,’ says Prof. Lars Ulrich von Wilhelminisch-Moewenlied. ‘I have learned English as a foreign language, and the four books are written in English, so there is little in any one of them that I cannot understand. Furthermore, the fact that I have learned English gives me the right to say what these four books should and should not contain. In fact, there are certain things about which I am able to make the following magisterial statement.’ The professor rises to his feet.

‘I don’t really think that the four authors would do those things.’

‘Hey, I can relate to that,’ says Dr G G Simmons. ‘I have learned the ancient Hebrew language, so there is little in the Old Testament that I cannot understand. Furthermore, the fact that I have learned ancient Hebrew gives me the right to say what the books of the Old Testament should and should not contain.’

Ten minutes later Dr Simmons walks into another room and lifts a leather-bound book from the table.

He’s glad to find that the book is written in ancient Hebrew, for he himself has learned the ancient Hebrew language.

The book consists entirely of poetry. Let us note that G G Simmons has never written, let alone published, any poetry of his own. (Poetry is like Latin prose. You must learn how to WRITE good Latin prose before you can fully appreciate the good Latin prose that you READ.) Furthermore, G G Simmons has never made a serious study of poetry in any language, including his own. So when he enters the realm of poetic composition, HE DOES SO AS A COMPLETE LAYMAN.

The book contains a lot of cryptography. Neither in the world of literary criticism nor in the real world of action has G G Simmons ever worked at cryptanalysis. Once a month he inserts the Parnassian word EFT (= newt) in the crossword of his wife’s local newspaper, and that’s as near as he ever gets to a cryptogram. So notwithstanding his expert knowledge of the Salamandridae, when he enters the realm of cryptography, HE DOES SO AS A COMPLETE LAYMAN.

The book contains a lot of mathematics. G G Simmons disliked mathematics at school, and he has long ago forgotten most of the elementary mathematics that he learned there. So when he enters the realm of mathematics, HE DOES SO AS A COMPLETE LAYMAN.

The book contains a lot of musical technicality. Musical physics, form and notation are things of which G G Simmons knows nothing, for he has never studied music seriously. He can neither play a musical instrument nor sing. He has never composed a melody, he doesn’t understand what is meant by the word ‘harmony’, and he has never made a musical instrument. So when he enters the realm of musical technicality, HE DOES SO AS A COMPLETE LAYMAN.

Gentle reader, we have encountered a Hebraist who knows very little about poetry, cryptography, mathematics and music.

G G Simmons is about to read a poetic Hebrew text which involves cryptography, mathematics and music. The fact that he suffers from Wellhausen’s Disorder will help him not at all.

Dr G G Simmons is A QUADRUPLE LAYMAN.

What's more, the fact that G G Simmons has learned the Hebrew language gives him no proprietorial rights in respect of the texts which he presumes to study. He is not the *owner* of those texts. If he believes that he *is* the owner of the texts, he has lost contact with reality. If he becomes angry when he is called 'a quadruple layman', he has an insane notion of his own competence. G G Simmons may be unwilling to find ingenious poetic devices, playful cryptograms, numerical riddles, and musical terms in a particular Hebrew text. But his own undesire to find such things must not lead him to characterize the discoveries of other scholars as either 'unlikely' or 'impossible'. He cannot say,

'I don't really think that a writer would do those things.'

He may as well say,

'My ignorance is superior to the knowledge of other scholars.'

Even the youngest of my readers will see at once that *the two statements are equally absurd*. (Before I go on, let me salute any reader of *THE LORD SHALL COUNT* who has not yet reached the age of sixteen. If you're prepared to study the Bible diligently, you have an exciting life in front of you.)

Memories of my own ignorance incline me to feel sorry for lay persons. When I was very young I read the following equation in a mathematical textbook.

$$[7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1] = 5040, \text{ or } 7!$$

I was dashed if I could see what the great joke was.

It's funny. The academic world is popularly supposed to function at the INTELLECTUAL level. Minds communing with other minds. Everything done, as Tacitus said, *sine ira ac studio* (= without anger or partisan spirit). No irrational emotion. Certainly no childishness, and no stupid histrionics.

How different the reality is you may come to see for yourself. Say that after reading a half-sensible book about gematria, you devote yourself for a decade to the study of the Hebrew Bible. Your expert knowledge of two disciplines helps you to discover in the Psalter a number of cryptograms relating to *building* and *astronomy*. (In Psalm 48 you find several architectural aphorisms. In Psalm 60 you find many facts about the nine planets of the solar system.)

Eventually you decide to share your discoveries with a number of Biblical scholars. Now you know that these scholars are at one with Seth Prodie and his puritanical disciples in believing the Bible to be a narrowly religious book. You also know that these scholars are ignorant of poetry, cryptography, architecture, and astronomy.

You reckon that they will object to whatever you tell them, but you believe that they will express their objections in a purely INTELLECTUAL manner. What takes you by surprise is the frantic infantile physicality with which they express their objections.

What do I mean? Does one of them challenge you to a fist-fight? Ha, ha, ha! No. I'm not talking about that kind of healthy physicality. I'm talking about petulant displays of ham-actorial anguish. By way of example let me record, I mean imagine, how you may be treated by a particular trio from your local doll's house.

Dr Sharp, Dr Flat, and Dr Natural, finding human language inadequate for their lofty purpose, give vent at different times to bestial snorts and grunts.

Dr Sharp closes his prim little mouth tightly, raises his eyebrows to the limit of possibility, opens his eyes wide, and stares sightlessly at the floor.

Dr Flat, whose normal mode of respiration is silent, inhales like a horse through hostile nostrils.

Then Dr Natural places his chin against his sternum, and lifts up his eyes, not without difficulty, so as to give you a *Let's-be-really-serious* gaze.

In that moment you realize why Shakespeare made Puck say,

Lord, what fools these mortals be!

It wouldn't be any more pitiable if a jellied eel tried to give you an electric shock. You have expected to receive a rational and INTELLECTUAL response. What you get is a collection of lips, brows, eyes, nostrils and chins from the masks of the Beijing Opera.

Such an exhibition of agony! You almost wonder if your three interlocutors, like the Philistines of old, have been smitten with emerods in their secret parts.

Have you been casting your pearls before swine? No. You've been asking oysters to root for truffles, and the poor ignorant oysters don't believe in truffles.

Let me speak for your interlocutors. If you're any good, you should be able to applaud, if not actually to enjoy, the rational demolition of your own thesis. Do you want to learn, or do you want people to think that you're a learned fellow?

Now let me speak for you. If the Stern Panjandrums of the Beijing Opera are any good, they should be able to demolish your thesis in a perfectly rational manner.

Yet when you confront them with things which particular writers have done, they contort their features and say, 'We don't really think that writers would do those things.' Here's what they mean to say. *We don't know about any of those things, so the writers whom you mention could not have known about them.* Brooding hens refuse to believe in the thermals on which gannets ride exultantly. They are helplessly addicted to the fatal convenience of negativity. Their Cartesian creed is *Nescio, ergo nesciebant* (= I don't know, so ancient writers can't have known).

For a moment you have a vision of the Bible as a great shining anvil. Beside it, the scholarship of your three interlocutors is revealed to be, in Poe's words, a *nearly liquid mass of loathsome – of detestable putridity.*

As the vision fades, you are struck by a bizarre inequity. The Panjandrums have one standard for you, and one standard for themselves. When they're listening to you, they demand that you back up every word you say with a footnote.

**The Walrus and the Carpenter
Were walking.....³⁹⁷**

Note 397. On zoanthropic coambulation, see Antiphony Wiltshire and Gideon Steyne, 'Phocal Locomotion or Femoral Length?', in *Oysterville Anatomical Studies* XCI (1951), 169-217.

But when they're responding to what you have said, the Panjandrums pass judgment solely on the grounds of their own ignorance.

'We don't really think that writers would do those things.'

(Or: *we don't really THINK, because we don't KNOW, and we refuse to LEARN.*)

Often it is ignorance that leads people to characterize some phenomenon as 'unlikely' or 'impossible'.

Ignorance may also lead people to believe a complete untruth. At a crucial moment in *La Symphonie Pastorale*, André Gide makes the narrator observe that

.....il n'est nulle part question de couleurs dans l'Évangile

(= there is no mention of colours anywhere in the gospels).

La Symphonie Pastorale is a labyrinth of deception and distortion. The pastor who tells the story is at pains to deceive both his reader and himself. He is most dangerous when he is on his home ground (the Bible).

By declaring that there is no mention of colours anywhere in the gospels, the pastor is telling a great lie.

Colours *are* mentioned in the gospels, as follows.

BLACK

Matthew 5. 36: *Neither shalt thou swear by thy head, because thou canst not make one hair white or BLACK.*

GREEN

Mark 6. 39: *And he commanded them to make all sit down by companies upon the GREEN grass.*

Luke 23. 31: *For if they do these things in a GREEN tree, what shall be done in the dry?*

PURPLE

Mark 15. 17: *And they clothed him with PURPLE, and platted a crown of thorns, and put it about his head.....*

Mark 15. 20: *And when they had mocked him, they took off the PURPLE from him, and put his own clothes on him, and led him out to crucify him.*

Luke 16. 19: *There was a certain rich man, which was clothed in PURPLE and fine linen, and fared sumptuously every day.....*

John 19. 2: *And the soldiers platted a crown of thorns, and put it on his head, and they put on him a PURPLE robe.....*

John 19. 5: *Then came Jesus forth, wearing the crown of thorns, and the PURPLE robe. And Pilate saith unto them, Behold the man!*

RED

Matthew 16. 2: *He answered and said unto them, When it is evening, ye say, It will be fair weather: for the sky is RED.*

Matthew 16. 3: *And in the morning, It will be foul weather to day: for the sky is RED and lowring. O ye hypocrites, ye can discern the face of the sky; but can ye not discern the signs of the times?*

SCARLET

Matthew 27. 28: *And they stripped him, and put on him a SCARLET robe.*

WHITE and WHITED

Matthew 5. 36 again: *Neither shalt thou swear by thy head, because thou canst not make one hair WHITE or black.*

Matthew 17. 2: *And was transfigured before them: and his face did shine as the sun, and his raiment was WHITE as the light.*

Matthew 28. 3: *His countenance was like lightning, and his raiment WHITE as snow.....*

Mark 9. 3: *And his raiment became shining, exceeding WHITE as snow; so as no fuller on earth can WHITE them.*

Mark 16. 5: *And entering into the sepulchre, they saw a young man sitting on the right side, clothed in a long WHITE garment; and they were affrighted.*

Luke 9. 29: *And as he prayed, the fashion of his countenance was altered, and his raiment was WHITE and glistering.*

John 4. 35: *Say not ye, There are yet four months, and then cometh harvest? behold, I say unto you, Lift up your eyes, and look on the fields; for they are WHITE already to harvest.*

John 20. 12: *And seeth two angels in WHITE sitting, the one at the head, and the other at the feet, where the body of Jesus had lain.*

Matthew 23. 27: *Woe unto you, scribes and Pharisees, hypocrites! for ye are like unto WHITED sepulchres, which indeed appear beautiful outward, but are within full of dead men's bones, and of all uncleanness.*

In making the pastor misrepresent Scripture, Gide is furnishing his reader with an important clue as to what is going on in the notebooks of *La Symphonie Pastorale*. The narrator is making up a gospel to suit himself. Why do many established scholars fail to pick up Gide's clue? First, because they're not familiar with the Bible. Secondly, because they can't be bothered to check facts. Thirdly, because they have read nothing about the pastor's lie in the works of other scholars. Instead of coming to the island of literature as urbane visitors, these blinkered members of the academic establishment take part in an utterly barbarous *Otchupâtion* (see the first epigraph on page 381). But sigh no more! Let them beg through life! As Goethe would say, *Es säuseln die Winde*. The winds are murmuring. Monkish creatures who content themselves with the Zfürs of the academic world will be blown to pieces by the Euroclydon of real literature. Before we break for tea, I'll put on the last movement of Bach's concerto for two violins. Then I'll relate a trivial anecdote.

In *Slavonic and East European Journal*, volume 28, number 4 (Winter, 1984), 546, a very competent reviewer called Marjorie L Hoover happened to say of the editor Laurence Senelick,

His neologisms, though comprehensible, infringe on accepted usage....."burglarious" (21), and "coolth" (154).

Neither 'burglarious' nor 'coolth' is a neologism. The word 'burglarious', which dates from 1769, has been used by Byron, Thackeray, and Dickens, while the word 'coolth' dates from 1547.

Since boyhood I have been tormented by helpless boobies who say to me, when I employ some lucid vocable like *collectress* or *undesire*, 'There's no such word!' How do these boobies behave when I reveal to them that the word in question is attested by *The Oxford English Dictionary*? Do they withdraw their allegation, and apologize for making it? No. They favour me with a disbelieving stare and a malignant grunt. Be warned. There is no point in trying to converse with such persons. Like the cerealogist of page 588, they are COMPLETELY WITLESS.

Now, then. Why did Marjorie L Hoover not bother to consult *The Oxford English Dictionary*? Because she refused to admit the existence of things which were remote from her own experience.

'I don't really think that those words have ever been used before.'

Lay people often cherish the romantic notion that scholars are concerned with 'establishing the truth'. Haw, haw! Not all of them are. When I sent a friendly corrective letter to the journal's editor, he replied in the most pleasant manner, and furnished me with Marjorie L Hoover's academic address. He went on to say that it was not editorial policy to publish corrections.

The editor had published a piece of untruth in his journal. I showed him the truth. He allowed the untruth to stand.

We meet a different editor in an older tale. George Orwell, best known for his novel *1984*, believed himself to be a good judge of literature. Writing in a journal called *Horizon*, he slighted the prolific author Charles Hamilton, who employed the pen-names of Frank Richards and Martin Clifford.

The stories in the Magnet are signed 'Frank Richards' and those in the Gem 'Martin Clifford', but a series lasting thirty years could hardly be the work of the same person every week. Consequently they have to be written in a style that is easily imitated – an extraordinary, artificial, repetitive style, quite different from anything else now existing in English literature.

Orwell was wrong. Two months later the editor of *Horizon* allowed Charles Hamilton to publish a lengthy response. The tale of Orwell and Hamilton has stood ever since as a warning to ignorant and presumptuous 'experts'. What Orwell personally considered to be unlikely he pronounced to be impossible.

'I don't really think that any writer could write so much.'

If he had been concerned to tell the truth with certainty, HE WOULD HAVE CHECKED HIS FACTS before he published. As it was, Orwell's limited experience of literature made him unfit to judge the quality of a particular literary phenomenon. But it's time for a break, so stop thinking about George Orwell. Listen to Thomas Shadwell.

Nymphs and shepherds, come away!

Two of the nymphs have prepared an Arcadian snack. Enter Rosie, bearing a pewter teapot. Enter Delia, bearing a plate of cheese-and-bacon cartwheels. While we eat and drink, I'll tell you two salutary tales from the scientific world.

Here's one. Fraudulent Haeckelian artwork is still being published in biology textbooks. (You remember all that *Discover your inner mermaid* stuff.)

Here's another. At the end of the eighteenth century, the Italian zoologist Lazzaro Spallanzani and the Swiss zoologist Louis Jurine investigated the nocturnal life of bats. Their rigorous experiments proved that the bat's *mouth* and *ears* played an essential rôle in allowing the animal to find its way about in complete darkness. These findings were immediately rejected by the 'scientific community', which would accept only the sense of touch as explaining a bat's ability to fly about in the absence of light. Spallanzani and Jurine were ridiculed.

'We don't really think that bats can do those things.'

What happened? The absurd 'official' doctrine was maintained for ONE HUNDRED AND FORTY YEARS. Established zoologists were unfit to judge the work of investigators who surpassed them in experience, industry, and intelligence. People who might have developed radar were denied a stimulus.

Scepticism at its worst is a substitute for virility, an excuse for idleness, and a preserver of the *status quo*. Why do professional scholars fight against facts? Because ignorance has a fierce survival instinct. Remember the tale of the bats.

'Det er en frygtelig historie,' says Delia. 'It is a terrible story.' She pauses. 'But you could fill a large volume with stories of the same kind. There are times when established scholars behave in a most dishonourable way.'

Indeed. And there are times when established scholars *use words* in a most dishonourable way. Let me move into another field. When they want to convert the mere opinions of their peers into oracles, some academics deliberately debauch words like 'identify', 'prove', 'establish', 'declare', and 'pronounce'.

Beware of the word IDENTIFIED.

'Arminius Java IDENTIFIED folk-tale motifs in every part of the Hebrew Bible.....'

No, he didn't IDENTIFY anything! Java THOUGHT, or BELIEVED, or IMAGINED, that there were folk-tale motifs in every part of the Hebrew Bible. That is all.

Beware of the word PROVED.

'Java has PROVED that the splendid description of leviathan in Job 41 is a reproduction of Chaldean mythology.....'

No, he hasn't PROVED anything! Java THOUGHT, or BELIEVED, or IMAGINED, that the description of leviathan was a reproduction of Chaldean mythology. That is all.

Beware of the word ESTABLISHED.

'Charles-Louis de Rote, Martine Dunès and Cervinus Juthens ESTABLISHED that the gospels were handed down orally not as one entity but as units....'

No, they didn't ESTABLISH anything! They THOUGHT, or BELIEVED, or IMAGINED, that the gospels were handed down in a certain manner. That is all.

Beware of the word DECLARED.

‘Josef Sudeen has DECLARED the Jehoash inscription to be a fake.’

No, he hasn't DECLARED anything! Sudeen THINKS, or BELIEVES, or IMAGINES, that the inscription is a fake, and he has said so. That is all.

Beware of the word PRONOUNCED.

‘Edvard Kaut has PRONOUNCED the Jehoash inscription to be a fake.’

No, he hasn't PRONOUNCED anything! Kaut THINKS, or BELIEVES, or IMAGINES, that the inscription is a fake, and he has said so. That is all.

Anyone who dresses up an opinion as a fact is not a scholar.

The following text should be sung by the *Choeur des eunuques* from Morata's opera *Don Juan*.

‘We don't really think that there is anything more to be said.’

And now let me speak prophetically. In case anyone forgets the prophecy, I'll chisel the gematric number 307 on a block of sandstone in the fern-garden. Many rubber-duck scholars arrogantly dress up their own false notions as facts.

One example. Dr Sharp has written, *The shofar cannot be classed as a musical instrument, since it cannot be tuned to a particular musical pitch.*

Another example. Dr Flat has written, *Like King Arthur, David was a mythical figure around whom a whole collection of stories has grown up.*

And another. Dr Natural has written, *For the first fifteen centuries of its existence, the Jewish nation had no system of written numerals.*

Some of these scholars will get the job of reviewing my book, and herein is a hilarious thing. Every one of them will accuse me of arrogance. Wait and see. (By the way, I have tuned any number of shofars to particular musical pitches at the bandsaw. It helps quite a bit when you know what you're talking about.)

‘You're reminding me of something, dear,’ says Delia. ‘At the end of the nineteenth century, a stone inscribed with runes was found in Minnesota. It's known as the Kensington Rune Stone, and it purports to date from 1362. Most runologists have *pronounced* the Kensington Rune Stone to be a forgery.’ She pauses. ‘Some scholars have even pointed to a crossed L-rune which is used on the stone as an invention of the putative forger. And yet the crossed L-rune is found eleven times in the Codex Runicus, the world's most famous runic manuscript.’

‘When was that manuscript written?’ Rosie asks.

‘Around 1300 AD,’ Delia replies. ‘Now I've never seen the Kensington Rune Stone myself, and I don't know whether it's genuine or not. Here's all I want to say. Several so-called runologists have never bothered to look at the world's greatest runic monument, the Codex Runicus, in which the crossed L-rune appears no less than *eleven times*.’

‘So they never learn that there is such a thing as the crossed L-rune,’ you say.

They never do, because reading a substantial manuscript is hard work. (Life is in some ways *easier* for those who devote themselves to a corpus of short inscriptions.) Thus, upon meeting a rune for which their narrow experience has not prepared them, the so-called runologists say,

‘We don’t really think that there was ever any such rune.’

‘That’s right,’ says Delia. ‘When they discover an example of the crossed L-rune on the Kensington Rune Stone, they *pronounce* it to be the invention of an incompetent forger. In fact, it is the runologists who are incompetent. They speak out of an ignorance which is based upon unimaginable idleness.’ Miss Benn pauses. ‘In them we see exemplified the sort of Decayed Human Turnips who *pronounce* things. Sometimes they destroy the lives of other people with their evil pronouncements. Do you know what? I get great comfort from what St Paul says. *It is appointed unto men once to die, but after this the judgment.*’

Delia takes a sip of tea. ‘Sorry, you lot, I didn’t mean to be so solemn.’ She smiles ruefully. ‘Two months ago I sent off an article on *Hamlet* to a scholarly journal. The deputy editor sent it back to me yesterday, and I’m really cross. Not because he sent it back. Because.....’ Miss Benn sets a small sheet of paper on the table. ‘Because he wrote a perfectly *diabolical* letter. Look at the last two sentences.’ She pauses. ‘I can hardly believe that the writer of those sentences is a professor who spends his life in the study of great English literature. I mean, the man’s prose is *horribly crippled.*’

The referees did not, however, I’m afraid, on this occasion, in spite of the article’s merits, to which they drew particular attention, recommend publication. I have, however, spoken to the chief editor, Dr Charles A Milverton, who specifically asked me to assure you, on his behalf, that your submission, concerned as it is, appropriately, with Shakespeare’s protocolonial *Weltanschauung*, was particularly appreciated.

Now hold on, Delia. A reasonably kind heart beats behind those two sentences. Through the glass of the curdled phrases, what can we see darkly? At least one decent person.

‘Oh, I know,’ says Miss Benn. ‘I’m not complaining about the man’s message. I’m complaining about his use of language.’ Delia looks at me so ferociously that I’m reminded of Mucha’s *Médée* poster. ‘Do you think I’m being unfair, dear?’

No, of course not! The two sentences that you’ve shown us are altogether frightful. They sound like caricatures of the old-fashioned university style. Each sentence moves with the pace and the grace of a mortally injured worm.

‘Yes,’ says Delia. ‘Sixty-one words, and sixteen commas. But the two tottering sentences are not uniquely awful.’

‘Many academics write in an equally graceless manner,’ says Lettuce Girl.

‘So they do.’ Miss Benn pauses. ‘They drag themselves about on their hands and elbows, like the broken-legged Gisco in Flaubert’s *Salammbô*.’

At the time of writing Homi K Bhabha is Professor of English and American Literature and Language at Harvard University. Here is a sentence from Prof. Bhabha’s book *The Location of Culture* (London, 2008), 344.

I want to ask whether this synchronous constancy of reconstruction and reinvention of the subject does not assume a cultural temporality that may not be universalist in its epistemological moment of judgement, but may, indeed, be ethnocentric in its construction of cultural ‘difference’.

At the time of writing Paul Fry is William Lampson Professor of English at Yale University. Here is a sentence from Prof. Fry’s book *A Defense of Poetry* (Stanford, 1996), 23.

It is the moment of non-construction, disclosing the absention of actuality from the concept in part through its invitation to emphasize, in reading, the helplessness -- rather than the will to power -- of its fall into conceptuality.

As Poe would say, such pieces of prose need no comment, and I will make none. But let me liquidate one hoary abomination that appears in the second sentence. ‘The will to parsnip’ is not English. Neither is ‘the will to power’.

That is true. Many scholars exult in the parenthesis, the aside, the concessive clause, and above all the comma.

‘They love the loathsome word *however*,’ says Rosie, ‘and they always supply it with two comma outriders.’

‘Yes,’ says Delia, ‘and by doing so they throw a completely spurious stress on to whatever unimportant word precedes the left-hand outrider. *I HAVE, however, spoken to the chief editor.* Am I going mad, or is that stupid?’

You aren’t going mad. But the spurious stress that you’re talking about is not confined to the academic world.

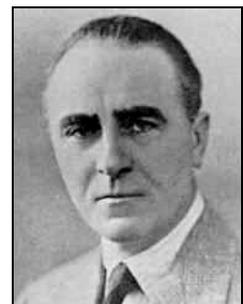
If fluent prose is a path, the word **HOWEVER** is a stumbling-block.

Frantz Fanon DID, however, salute Georgette Heyer as a great writer.

Jacques Derrida HAD, however, come to venerate the works of Hugh Foulis.

Sandy Boucher and Doris Anderson ARE, however, admirers of John Buchan.

Kate Millett DOES, however, have a considerable respect for Sax Rohmer.



(You should stress the words *did, had, are* and *does* in the foregoing quartet of sentences only if you mean to contradict a person who has declared that Frantz Fanon did NOT salute Georgette Heyer as a great writer, that Jacques Derrida had NOT come to venerate the works of Hugh Foulis, that Sandy Boucher and Doris Anderson are NOT admirers of John Buchan, and that Kate Millett does NOT have a considerable respect for Sax Rohmer.)

Bad speech is often born of bad writing. Those writers who have set the stumbling-block **HOWEVER** in their sentences are to blame for many of the spurious stresses which infest modern speech. Over time, whether in writing or in speaking, people accustom themselves to pointless ugliness.

Of course those who listen may imitate those who speak. During my lifetime, broadcasters who insist on stressing prepositions.....

What exactly will you say TO the minister?

.....have taught their vile practice to obedient members of the public, along with insane pronunciations like 'ay-nother' and 'Ay-dolf Hitler'.

'Next week, in the course of a long soliloquy, I have to quote one line from a Zulu poem by Alfred Temba Qabula,' says Delia. '*Ngangihekwa yimvungu yabe izwahal' emnyango*. That means, according to my producer, *I went mad because of the stupid talk which I could hear from the doorway.*'

Stupid talk *is* maddening. I could throttle the drab drones who say *I kid you not*.

'Even a couple of stupid syllables can be maddening,' says Lettuce Girl. 'My cousin Andrew is a journalist in Glasgow. If some person happens to live on the top floor of an apartment block, Andrew excitedly gabbles the word *penthouse*.'

Last year Andrew wrote an article about the ephemeral language called Scots Yiddish. (*Aye man, ich hob' getrebbelt mit de five o'clock train.*)

Listen! From time to time you hear silly people complain that the Ten Commandments are mostly negative. Those silly people should go to a riding-school. Learning to ride involves learning *not* to do a number of different things.



The same goes for learning to play a musical instrument, such as the crumhorn. And the same goes for learning to write good English. You can enhance the standard of your spoken and written English merely by obeying a thousand negative commandments like the sixteen which follow.

1. NEVER use the noun *key* as an adjective.
2. NEVER use the word *this* twice in a single sentence.
3. NEVER use the word *just* as an adverb.
4. NEVER use the word *however*. (I've managed to write thirty chapters of a big book without using it once.)
5. NEVER say *particularly* when you mean *very*.
6. NEVER say *hopefully* when you mean *I hope that*.
7. NEVER say *prior to* when you mean *before*.
8. NEVER say *due to* when you mean *because of*.
9. NEVER say *impact* when you mean *impinge*.
10. NEVER say *invaluable* when you mean *valuable*.
11. NEVER say *each and every* when you mean *every*.
12. NEVER use the booby-phrase *in denial*.
13. NEVER use the booby-phrase *Since when*.
14. NEVER use the booby-phrase *nuclear family*.
15. NEVER use the booby-words *objective* and *subjective*.
16. Unless you're talking about the Caucasus Mountains, NEVER use the lunatic word *Caucasian*.

Now let me take up something that Delia said a moment ago. Many scholars spend their lives in the study of great literature, and refuse to write elegantly. Why? Even in the case of people like Aleksandr Pushkin, elegant writing is not merely a matter of some marvellous 'gift'. The elegant writing of a mature author usually represents both an early act of choice and a long period of rigorous discipline. To say of the novelist P G Wodehouse that he writes brilliantly because he is 'gifted' is a bit like saying,

Young Udilaca walked with the fine natural dignity of the Mgarne people.

Forget about 'fine natural dignity'. Good walking indicates an effort of the individual will. Every so often, when I'm sitting in an airport, I see a young woman who walks superbly, and at the same time I see a person whose taut facial acuity proclaims her to be a dancer.

The fact that many scholars are not voracious readers of good fiction explains both why they are unable to READ a book fluently, and why they are unable to WRITE well. An academic writer whose only literary models are the works of other academic writers is a pitiful case.

Let me add that when certain scholars write ungrammatical English, their editors appear not to notice. Bad English has become respectable in the brave new Latinless world. Hoagie Caruso McLoy can be as bad as anyone.

It is even possible for a *Bulletin of Phantasmal East European Palaeolycanthropy* (let the reader understand) to have its birth ululated as follows.

The aim of BOPEEP is to publish specialised papers of phantasmal East European palaeolycanthropy at the highest standard and will only accept contributions which reflect this level of excellence.

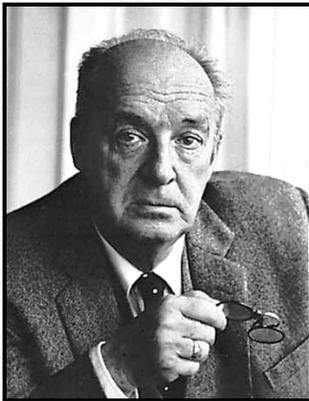
An aim cannot accept contributions. Self-appointed judges who demand 'high standards' and 'levels of excellence' should be able to write correct English. What educated man will submit his work to the judgment of pretentious clowns?

If an academic author can't be bothered to write elegantly, he should take care never to come out with the following sentence.

'I don't really think that a writer would do those things.'

Does a wantonly idle and slovenly workman know what a diligent craftsman would or would not do?

Does a writer of ugly academic prose know what an artistic colossus like Nabokov would or would not do?



Look at the excerpts from *Pnin* which follow.

The famous Waindell College bells were in the midst of their morning chimes.

Laurence G. Clements, a Waindell scholar.....and his wife Joan.....had recently parted with their daughter.....Isabel had married in her junior year.....

The bells were musical in the silvery sun.....Miss Dingwall's old Scotch terrier.....had started upon his rounds.....

The bells, under the enthusiastic direction of Dr Robert Trebler, active member of the Music Department, were still going strong in the angelic sky, and over a frugal breakfast of oranges and lemons Laurence.....

.....an ancient town with water so precious, and the misery of donkeys, and rugs for sale, and foreigners and melons.....

Miss Dingwall came out.....let the.....dignified dog in.....

You'll notice that 'morning chimes' are everywhere.

There is a bell-sound in WainDELL.

Laurence and Joan have a daughter who IS A BELL.

There is a bell-sound in the name of Miss DINGwall, whose dog has started upon his ROUNDS.

Eventually Miss DINGwall will let the DIGNIFIED DOG IN (= ding dong).

Dr ROBERT TREBLER is actually the method of change-ringing known as 'Treble Bob', and ACTIVE MEMBER (no definite article) means 'a.m.'.

Laurence's impossible breakfast of ORANGES AND LEMONS comes from an English nursery rhyme, and so does his surname.

*Oranges and lemons
Say the bells of St Clement's.*

The phrase FOREIGNERS AND MELONS needs no comment.

Behind LAURENCE G. CLEMENTS there hides the person of Lorenzo Ganganelli, Pope Clement XIV (central picture on page 664).

Let us wait to see if anyone wants to say,

'I don't really think that a writer would do those things.'

No takers? Good. Look now at a short passage from the final chapter of *Pnin*.

I am so constituted that I absolutely must gulp down the juice of three oranges before confronting the rigours of day. So at seven-thirty I took a quick shower, and five minutes later was out of the house in the company of the long-eared and dejected Sobakevich [= a dog].

ABSOLUTELY MUST means 'a.m.'.

Look at the impossible word SO which begins the second sentence.

I always start the day with orange juice, so I took a quick shower

is obvious nonsense, even if Nabokov intends a reference to the three oranges of Carlo Gozzi's *L'amore delle tre melarance*, which had to be opened in the presence of water. What is the explanation? Any intelligent sailor will tell you. THREE ORANGES denote the three bells which sound for seven-thirty during the second DOG-watch. Nabokov's three-orange sentence really means, *I am so constituted that I must rise every morning at seven-thirty*. Oranges in *Pnin* are matutinal bells.

(Another cryptogram. The dog's LEAD hides in *long-eared and dejected*.)

'I am an academic author,' says Lexis Picot, 'and I can't see why any great writer would waste his time in playing tricks like that.'

Dr Picot has used a multitude of syllables. Three syllables would have sufficed: *I can't see*. Oh, the pity of it! What does a blind academic author like Lexis Picot really WANT? I'll tell you. He wants people to believe that he is a learned fellow. Now let me tell you in hackneyed language what a real author wants. He wants to enchant. He wants to entertain. He wants his readers to have experiences that will change their lives. A real author is like Raphael painting *Il Parnaso*, and a real author is like Sergiu Celibidache conducting the fifth symphony of Bruckner. Lexis Picot is like the bespectacled Tillotson in George Orwell's *1984*.

'Tell us something, Lexis,' says Rosie. 'What are you working at presently?'

'I'm writing a commentary on the Song of Solomon,' Picot replies. He looks at his watch. 'Hey, it's 18.23. I have to catch a train in fifteen minutes! I'd better go.'

'Wait,' says Rosie quietly. 'Do you agree that the Song of Solomon is *poetry*?'

'Yes, of course,' Lexis answers.

'Good,' says Rosie. 'Do you know what you should put at the start of your commentary, Lexis? A one-page poetic prologue.' She pauses. 'Then your readers will realize that when you talk about poetry, you know what you're talking about.'

'What sort of prologue do you mean?' Lexis sounds surprised, but not hostile.

'Let me think.' Rosie looks into space. 'The Song of Solomon is written by a man who has turned from *much study* and *many books* to proper forms of affection.' She pauses. 'Is there any blithe and lovely lady of whom you are very fond?'

'I am altogether in love with my wife Bridget,' Dr Picot replies.

'Right,' says Miss Stone. 'Listen, Lexis. When you've finished your commentary you can dedicate it to your wife in one sentence, if you want. Or you can go further. Take all the passages in which Solomon describes the beloved woman, and write your own creative response to them. Let that creative response be your *honest* dedication.' Rosie pauses. 'You see, most male scholars who dedicate their books to their wives have really dedicated themselves to winning the approval of other male scholars. But a dedication should be *true*.'

'So it should,' says Picot. 'You're giving me plenty to think about, Rosie.' He rises to his feet. 'Look, I'll really have to go. Thanks very much, everyone.'

When the door closes behind Lexis Picot, we surrender ourselves to an irrefrenable ecstasy of yawning.

Oooooohhhh! I'm tired of *thinking*. Maybe I'll go to the outdoor pool in.....

'Good idea,' says Lettuce Girl. 'I've had enough sun for one week. We'll all go.'

'Yes,' says Rosie. 'Then we can drive to Bangor for dinner. On the way back we'll stop at my father's nursery, and taste some of his new cucurbital fruits.'

Ninety minutes later, as an opiated man completes his sixty-fourth length of the pool, a Circean woman speaks. 'Listen, dear. Something will have to be done.' The woman inhales slowly. 'Bridget Picot is becoming a *muse*.'

What do you mean? A high-timbred voice may not be felt in Cobalt Creek.

'Stop gibbering to yourself, and listen.' Circe pauses. 'We know that Lexis Picot will soon be at work on a poetic response to *the Song of Solomon*.'

Oh, yes. So we do.

'And we know that Lexis will dedicate whatever poem he writes to *his wife*.'

That's nice. Maybe he'll anagram his own name and call the poem *So Explicit*.

'Don't be boring.' Delia pauses. 'You should write a poetic response as well.'

To the Song of Solomon?

‘Yes! A coruscating, gemmeous response. Gematric as well, if you want.’

Why?

‘To help poor Lexis. To show him the sort of things that he ought to say.’ Miss Benn pauses. ‘Write one tonight. You can dedicate your poem.....’ She stops.

To *you*?

‘Of course.’ For a moment Delia favours me with a cold Pre-Raphaelite smile that would have made Achilles tremble. ‘Have you someone else in mind?’

No. (The pool attendant – an old servitor of Zygal Squid – has stopped to listen.)

‘Oh, good. Remind me to get you a ticket for a Certain Sculptor’s exhibition.’ At once Miss Benn moves into didactic mode. ‘Nabokov refers to a nursery rhyme in *Pnin*.’ She looks down at the water. ‘You should refer to a nursery rhyme in your poem, dear. By way of establishing your formal boundaries. I mean, if you allude to *four and twenty blackbirds*, you’ll have to write six quatrains.’

Six quatrains? Go away! I was hoping to get off with a sonnet. You’ll be glad to know that the present moment has inspired me to write four opening words: *We march in Wales*. (Those words encode certain habiliments, fair enchantress.)

‘Oh, you’re so explicit!’ says Miss Benn. ‘Now stop being stupid. And forget about iambic pentameters. I want thirteen-syllable lines with a strong trochaic pulse. In the rhythm of: *Wasn’t that a dainty dish to set before a king?*’ She pauses. ‘Declare war on leprous modernity. Do something with the letters ell and cee so as to celebrate *life* and *chastity*. Make every line really concentrated. Or as you used to say yourself, dear, make every syllable count. Your poem has to be exhilarating, and clean, and *overpowering*.’ Miss Benn flexes her arms, and blushes like a schoolgirl at her own imperious demands. ‘Incinerate the cities of the modern literary plain with six healthy quatrains.’ The pool attendant moves away, and Delia laughs. ‘Twenty-four thirteens hint at 2413, the reversal of *pi*!’

Hilarious. First of all she says, TO HELP POOR LEXIS. Now she says, I WANT.

For some reason there sounds in my head an old Ulster drum-tune of which feminist scholars disapprove. *The man beat the woman down the Lambeg Road*.

Oh, well! Of course the job will be a nuisance, but it won’t be a waste of time. Anyone who writes a poetic response to the work of a particular author may come to appreciate the technique of that author in a new way.

Mind you, it’ll still be a frightful nuisance. Why do I nearly always do what Delia tells me? First, because she is more overpowering than Yang Guifei. Secondly, because she is a lover of good language. And thirdly, because she is the most intelligent person whom I know.

At the age of seven Miss Benn vandalized her mother’s cookery book by changing the insane phrase *Chicken Maryland* to ‘Maryland Chicken’. Eighteen years later she gave evidence at the trial of three malevolent bike-nerds. Delia was cross-examined by a musical but notoriously conceited lawyer whose surname is Toad, or Todd. I can still remember four of their exchanges.

TOAD Surely you're being a little bit extreme, Miss Benn.
DELIA There are no degrees of extremity, sir. Furthermore, extremity cannot be presumed to connote pejority. I mean, we all try to keep ourselves extremely clean.

One of Delia's answers caused Toad to appeal to the judge.

TOAD Don't you think, Miss Benn, that you're being rather too dogmatic?

DELIA Yes, sir.

TOAD I'm afraid I don't understand your reply.

DELIA Then let me expand it. Yes, I don't think so at all! The problem is that you don't understand your own syntax, sir. In your place, I should avoid the negative question.

The judge, an old-fashioned classicist who hated Toad with the perfect hatred of the Psalmist, was delighted to support Delia. Forty seconds later:

TOAD *[Laughs operatically.]* Perhaps your profession gives you a proclivity for overstatement, Miss Benn.

DELIA I am a professional actress, sir, not a ham-actorial Dogberry.

Concede now or die, whispered the leering judge. Less than a minute later:

TOAD Do you expect me to believe that, Miss Benn?

DELIA No, sir. I expect nothing of your intellectual processes.

Once again Toad appealed to the judge, but in vain. Before Delia left the witness-box, the judge thanked her for the sublime cogency of her answers, and added that many lawyers would do well to learn from such a sagacious witness.

What brought those forensic delicacies into my head? Well, we've driven to Bangor, and we're sitting in a well-known Chinese restaurant. Cicely Grove and her clerical *fiancé* have joined us. The archdeacon has found shell-trumpets in verses 6 and 7 of Psalm 98! You and Rosie have your backs to a purple-faced gentleman who is staring at Delia as the chairman of the Child Protection League might stare at Medea. Is it one of the local drama critics? No, it is Mr Toad.

A person who doesn't understand his own syntax, a person who employs prefabricated booby-questions like *Do you expect me to believe that?*, should take care never to come out with the following sentence.

'I don't really think that a writer would do those things.'

Northern Ireland is a small sort of place. Last week I attended an evening lecture entitled *Images of Royalty and Ritual from Iphigenia to Old King Cole*. In the expectation of folly I brought with me a notebook and a poem by Joachim Ringelnatz. On entering the unheated recital-room, ten minutes before starting-time, I found Mr Toad and a very tall lady conversing behind an upright piano with the appointed speaker, Dr Reginald Dacke. ('But how can the American forces gain retreat?' Toad was asking. 'Belligerents! Disgrace!' hissed the tall lady.) I shook three hands. The lady was wearing an opal ring. ('You mean Plainer Street in *Alpena*,' said Dr Dacke.) A lovely smiling Daphne, dressed in laurel-leaves, appeared from nowhere and gave me a handout. It was Greta Hegans.

I knew the room well. Tonight its furniture included a theatrical throne (for Old King Cole), and a garden-centre altar (for Iphigenia). On a notice-board by the door, some elderly vandal had hacked the name of CLAUDIA SCHIFFER in explicit knife-runes. On a whiteboard at the front, under the title *General Tasks*, someone had written the famous poem of Ono no Komachi which begins 夢おには.

(‘No, you are confronting exploitation *as a feminist*,’ said Mr Toad. Behind me a short woman shouted, ‘My dears, you must be absolutely freezing!’ Then Dr Dacke spoke quietly. ‘Ah, good, the music critics are here. Yes, she *is* my stepdaughter, but it wasn’t easy. I had to create a certain obligation in advance.’)

Clever arty-looking people were colonizing the room with their dyed hair, bow-ties, spectacle-cords, and musky deodorants. (‘Later on I want to ask you about *chemistry*,’ murmured Daphne.) Already some association of permanently wide-eyed persons was taking over the back row. I looked around me. The whiteboard was flanked on one side by a Periodic Table of the Elements, and on the other side by an altogether stupid poster. Oh, well! In the 1830s, you had phrenology.

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(‘*Glass Egret!*’ cried Mr Toad. ‘Images of enormous melons pervade his work,’ said Dr Dacke. ‘He said *Go-EETH-ie*,’ whispered the very tall lady. ‘The poor man meant *Goethe*.’ Dr Dacke laughed. ‘No, Fancy Lane is in *Calcutta*,’ he said. ‘But he’s writing a novel called *The Sights Rag*. About a jazz pianist who works as a tourist guide. No, she’s a student! Grace is preserting at Quilt International.’)

There was a hornbeam table at the back of the room. Above it hung a placard which bore the word REFRESHMENTS. Two embarrassed-looking ministrants stood behind the table. They turned out to be Lettuce Boy and his unshod sister. *He* wore a crown and a heavy ermine-bordered robe: *she* wore a cooler costume of leafy green. After talking to the pair for some time, I surveyed the plenishings of the table: a tea-urn, a multitude of polystyrene cups, a heavy clay bowl filled with small pieces of melon, a box of cocktail sticks, and seven plates of biscuits.

On each plate there reposed about twenty plebeian platitudes, drab in their nakedness, and a single opulent Olympian, clad in golden foil. The platitudes were so-called ‘Marie’ biscuits, and here a historical note is called for. Marie biscuits were named after the Grand Duchess Maria Alexandrovna of Russia, who married the Duke of Edinburgh in 1874. They represent an English invention which became unaccountably popular all over Europe. It always shocks people to learn that after the Spanish Civil War, the woefully unmacho Marie biscuit became a symbol of Spain’s economic regeneration.

Marie biscuits are pale vanilla-flavoured wraiths made from wheat flour, sugar, and vegetable oil. They are embossed on one side with old-maidish filigrees. In truth, they are the Sad Losers of the larder, the anaemic enemies of gastronomy, dutifully eaten by the sort of earnest termites who enjoy sitting on committees. Marie biscuits are two-dimensional discs which provide neither teeth nor tongue with pleasurable work: neuter forms of food that lie on the boundary between existence and nothingness: genuinely vicious circles, with neither taste nor texture to commend them: biscuits having the character of cremated jellyfish. Some people profess to *like* Marie biscuits. Such is human perversity.

But lo! The Sad Losers weren't having the whole show to themselves. On the centre of each plate, bright as the dome of a Russian church, sat a chocolate coconut biscuit like a king in golden raiment: an imposing three-dimensional king, unimaginably superior to the pitiable pawns who lay in abject flatness all around him. Each of these glorious biscuits was like a little millstone three inches in diameter, with a rounded upper edge and a half-inch hole in the centre. Each of them promised both a rich harmony of colours for the tongue, and a gritty plenitude that would give the molars plenty of work.

I washed down three millstones and five pieces of melon with a cup of hot tea.

At five past eight people took their seats. Two local photographers entered the room. Chaste barefooted Daphne set down a pearly plinth not far from where I was sitting, and mounted it. 'Vestal Graces!' one photographer muttered.

Mr Toad, accompanied at the piano by Mrs Go-eeth-ie, sang a mock-Handelian setting of 'Old King Cole'. Mrs Go-eeth-ie played the gigue from Bach's Partita no 1 in B flat major. What followed was frankly visual. Lettuce Girl sang Iphigénie's aria '*Je t'implore et je tremble*' (in which Gluck uses material from the Bach gigue). 'Sculptural breathing,' whispered a music critic. Jane went on to play the melody of Schubert's 'Iphigenia' on her dragonish green violin. Mrs Go-eeth-ie accompanied the leafy girl in both pieces. All three musicians were heartily applauded. Then the lights went out. ('Someone has turned out the lights,' said a local schoolteacher.) After a minute they went on again. The dazzling Greta passed me an imperious note: *YOU HAVE TO PAINT ME LIFE-SIZE AS DAPHNE*. Mr Toad rang a handbell. A most unmerry monarch (Lettuce Boy) took his seat on the throne. A cheerful motel hostess (Lettuce Girl) took her stand beside the altar. Cameras flashed. Mr Toad welcomed the speaker, who turned out to be.....

..... A TIDAL WAVE OF JARGONESE! Dr Dacke used the word 'postcolonial' with such insane frequency that after three minutes I was tempted to feign illness, excuse myself (*Vomiturus vobis valedico*), and depart. Suddenly a well-known actress sat down in the vacant seat beside me. Ignoring the lecturer and his Platonic solo, she wrote the following lines on a piece of card.

*When tall Matilda learned to waltz,
She said goodbye to Scottish malts,
And drank the best Australian wines
With friendly young A-bòr-i-guines.*

Now that the muse was at hand, I felt obliged to take out my notebook. *Advance to gain retreat*, said a toad-like voice. At once I decided to brutalize the Japanese poem, through which as a younger man I had once cribbed my incompetent way.

ROMANCE INSANELY SWEET

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| 夢おには | On Fancy Lane my feet |
| あしもやすめず | In trance maintain their beat: |
| かよへども | By chance we feign to meet! |
| うつつにひとめ | I dance in vain to greet |
| 見しごとはあらず | Your glance in Plainer Street. |

That put me in the mood for technical exercise, so I went on to weave a Latin poem of seven trochaic tetrameters around the name of CLAUDIA.

*Candida claret carmina!
 Laeticam collaudavi.
 Astrum dico palam illud:
 Usquequaque nauta risu
 Delectavit bardos orta.
 Idam si lustrabit semel,
 Alacer contendam illuc.*

Let a beauty grace my songs! I have praised the one who brings me joy. Now I shall name that illustrious star plainly, for since her appearance in the firmament the sea-borne maiden has entranced poets everywhere with her smile. If she ever walks on Mount Ida [a reference to the Judgment of Paris], I shall hasten there eagerly.

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Soon I fell into a kind of dream-cartoon. Gogol's character Konstantin Kostanzhoglo was jiving with the Turkish dancer Yasemin Kozanoğlu, to the music of Big Seth and the Tray-Bakes. Lead vocalists Trish Stratus and Stacy Keibler, whom Seth knows well, were crooning a hellish chemical song-text.

High heels, lifting Beryl. Boris, carving Nilotic oxen. Florid nun, showing magical album. Silken Prospero, sullenly cloaking ark. Potala Castle, scanning titanic vanguard. Cromwell, managing ironic cobra. Nicola's corporal, sinking. Gallant German arsonist, selling broken crypt. Rune-stone idioms, irking nebular melody. Technician, ruling road. Parade, resolving Cadiz indeed. Tiny antenna, telling Naiad's enemy. Cecily, baring languidly half-tantalizing tongue. Rhenish ostler, irately planting golden mark. Thelma, leading Bicester Polly's asinine raid. French radio, acting rudely during September. Baron, hastening. Mightier dormouse, ranting. Syrian president, needing prominent samurai. Europa, galloping terribly. Despair, hoping. Urbane tulip, disturbing lute. Author, protecting your nephew's plot. Miracle-cure, bearing corneal eyesight. Firemen, amending noble law.

Glejj von Qwemb followed with a modern version of 'The Willow Song'.

*How dreadful, how sudden! My dreamboat has sunk;
 But now I've been jilted, I know she was junk.
 My head has been drugged, and my heart has been drunk:
 I fancied a skylark: in fact, she's a SKUNK.*

‘Pot’s tearing aggressive lays!’ said the muse in my right ear. ‘Compose a melody.’ *Very well.* Carefully I scribed four staves on one page of my notebook, and made up a simple pentatonic tune of eight two-bar sections. Every section turned out to contain six one-beat notes and one two-beat note. Once the tune was written, it seemed to demand a trochaic text of four stanzas. I wondered if I might say clumsily the same sort of thing in Latin, German, French, and English.

*O nympharum regina,
Ridear quod amo te;
Ludant tua lumina
Laborantem lascive,
Vel irarum fulmina
Furentem refutent me:
Te cantabo, divina,
Decore et iucunde.*

*Lauten Hohn erleide ich?
Lorelei, ich liebe dich!
Dein Gesicht erfreute mich,
Wenn es heller Sonne glich,
Aber, wie der Blitz, dein Stich
Scheuchte mich, so daß ich wich:
Doch mein Lied erweitert sich,
Göttin, gern und feierlich.*

*Tu dédaignes ton galant?
Mon amour est enduring;
Si ton oeil dissimulé
Trompe mon esprit muré,
Ou l’éclair de ta fureur
Me ramène à ma douleur,
Reine, je te chanterai
Décemment mon virelai.*

Queene of Faerie, let me be
Laugh’d to Scorne for Love of thee:
Let thine Eyes in wanton Glee
Sporte with poor afflicted me;
Let thy lightning Change of Key
Bid my frantick Spirit flee –
Heav’nlie Maiden, cheerfullie
I will sing my Fealtie.

After writing those stanzas, I began to channel two creations of the very tall lady.

*Go easy, goetic Go-eeth-ie!
You’ll freeze in noetical Lethe:
Your gaiter will loiter,
And later your goitre
Will tease a coed in Ibiza.*

*If your opal is duly subpoena’d
By Europa’s Apulian Maenad,
You can open a school
With a rope and a rule
For elopers like Julie or Enid.*

What next? It was either listen to the Dacke-monster or keep on writing, so I set myself to translate the poem by Joachim Ringelnatz which I had brought with me.

*Ein männlicher Briefmark erlebte
Was Schönes, bevor er klebte.
Er war von einer Prinzessin beleckt.
Da war die Liebe in ihm geweckt.
Er wollte sie wiederküssen,
Da hat er verreisen müssen.
So liebte er sie vergebens.
Das ist die Tragik des Lebens.*

A stamp was stung with blissful pain
Before his glue was stuck:
He felt the tongue of Lady Jane,
And gleeful Cupid struck.
The stamp was keen to kiss her back,
But had to go away.
He loved the queen in vain, alack,
For life’s a woeful play.

Then I wrote two less-than-Parnassian quatrains about an ancient musician.

*Orphage was a clever boy
Who hadn’t any luck;
It gave him very little joy
To be the plot for Gluck.*

*His idiotic wife is trapped
In dark Plutonic shade:
The stupid woman yapped and yapped
Till Orphage disobeyed.*

Suddenly the dream-cartoon started up again. I appeared to be sitting in the middle of what the Roman poet Horace would have called a barren college of boobies, old charlatans, decayed men, mummies, and pallid crones. Erich von Pemmican was presenting Buffalo Bill to Ziereck Adonis Dvornik, the celebrated

lycanthropist. Isadora Duncan was mocking Isagoge Introduction. Some Welsh harper was lauding the shell-clad Iphigenia in terms of achingly lilted chords.

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| <i>I have trodden Vergilian roads, And composed in Ovidian modes; I've had capital sport With my Lewis and Short, And I've parodied Horace's odes.</i> | <i>But I'm back to λυω and λυειν: There is nothing but Greek in my brain! Every tittle and jot In my Liddell and Scott Will acclaim the callimerous Jane.</i> |
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'They are mythical heroines,' said an archdeacon. 'Even artists who have never seen Jane and Greta will try to paint them.' A balbutient Claudia Schiffer was eating Wewelsburg cucumbers in an attempt to curb her tongue. Beside her stood Bessie Bunter and Mrs Danvers, the joint editors of an obscure feminist broadsheet. Monte Cristo was turning Neighbour Verges, Chumley the Walrus, Beaky Thwaite, Theophilus Goon, and Alain from *La fille mal gardée* into wooden jars. Io was chanting the *Kalevala's* recurring line *Vaka vanha Väinämöinen* (= Wise old Väinämöinen). Zygol Squid was trying to convince his superiors that Dvornik had treated certain pieces of journalism with 'malignant creativity'. I passed a stub of pencil along the row to Daphne. Ten seconds later Delia spoke in my ear. 'We'll have to ask Jane and Greta out for supper. That gibbering old pander is practising the very exploitation that he affects to condemn!' *Agreed.*

Daphne and I occupied the last twenty minutes with a discreet exchange of diplomatic notes. [WHY ARE YOU HELPING THAT CHARLATAN? BECAUSE I'M HANDING IN MY THESIS NEXT WEEK. AND HEY! NO ONE MUST KNOW THAT I'M MODELLING FOR YOU UNTIL I'VE GRADUATED. AGREED? YES. LISTEN. WHAT. HAVE YOU PUT MY RAHAB AND PLEIADES IN YOUR BOOK? YES. GOOD. LISTEN. YOU KNOW THE PERIODIC TABLE OF THE ELEMENTS. YES. IS IT IMPORTANT? YES. THEN WHERE IS IT IN THE BIBLE? And so on.] Greta would make a jolly good agent. I mean to say, it's hard to write a message when you're posing on a plinth.

Revenge! Two days later I wrote the abstract of an article about 'Old King Cole' in the style of Dr Ferruginous Duck, or whatever the man's name was. Here it is.

Postcolonial race-gender-class theorists like Mjeledi who reconjugate the subaltern-paradigm in metahierarchical terms believe that although albocentric paternalism is Cole's keyest given, the anachronistic scopophilia which is embeddedly phenomonic in any gendered-gaze reading of a palaeocolonial 'hisness' contrapuntally devalorizes the monarchical masterism inscribed in its metrically tyrannized text. Irradicated in (and synergetically liminalized by) the metrocolonial project, the orientationist reliquary called 'literature' is still intolerably vinculated by antiquated palimpsest-edicts, with the result that hyperprivileged parasocietal proaesthetics like Mercator's racist projection and deracinative heterosexist compradorism, which were weakened by the postcolonial academy, are periodically revalorized. Any scriptocentric deembedding of Mjinga's 'old' regalism chromatizes the race-gender-class postcolonial counter-discourse by cartographically narrating the keyness of its praxis. While the pocahontasized Cole is 'merry', he barbarianizes his 'soul' by exploitatively subvalorizing his own postcolonial people-group, for it is clear that the heterocratic givenness of his environment tangentializes on a conveniently pretasked 'was'. Cole's alteritous metaracism deossianizes the hypoculturally paracolonial non-keyness of his cultural-tinge hegemony, derridizing the postcolonial embeddedness of anglocentric conspecifics and hypervalorizing their fallaciloquent metacolonial systemic nexus-links with the givenly Eurocentric 'enlightenment' project (Dodds 2009). My race-gender-class explication of 'Old King Cole' postcolonializes Mkurugenzi's keyly unventriloquized xanthochroism to a substantial

extent within Akimbo's in-denial paraculture of haggardized protocolonialism by epistemically reconfiguring the hybridic narrative-fissure between the hypercolonial semioticism of the 'pipe' and the oligocentric essentialism of the 'bowl'. It is possible that the obviously female 'fiddlers' (whose very instruments, having been made by men, are provocatively gynomorphic) serve to valorify the transculturation that Halliday critiques by characterizing all models of postcolonial 'threeness' (which we metathetically mimic) as thridacocentric rhizomes of subcolonial joplinism (which we noologically auscultate). Having been peripheralized, and beaten in accordance with 'the rule of thumb', the gratificatory female slave-musicians cry out for postcolonial deminstrelization, retroduding Cole's crusoelist parahegemony even as they fanonize the lexicon of autocolonial surveillance-behaviours. Mbuzi's keyer subechelon of heterocolonial bricoleurism must be interrogated metaculturally for the ultraimperialist heuristics that it dereifies and the hyperembedded deontics that it postcolonially otherizes (Traumann 1993). Those who discern the avunculodidymal splitting that the king has really 'called for' will not deny that the closet-Manichaeen Cole's 'merriness' is a heterochauvinistic expression of unicolonial dude-power, and nor will they fail to applaud the utter rectitude of *laissez-faire* misandry, which Jean Wills defines as the key energizing principle ('The Voice') of postcolonial theory.

Sorry, everyone! I've been dreaming in cartoon mode for bits of the last few pages. But some of you know that I have described the lecture accurately. And we all agree that people who use the English language in the manner of Ferruginous Duck should be forbidden to come out with the following sentence.

'I don't really think that a writer would do those things.'

'Ugliness is always looking for company,' says Lettuce Girl. 'The post-exilic cultic practitioners are starting to meet the postcolonial valorizers.' She pauses. 'I wonder what monsters of *quasi-language* will be born of the encounter.'

'They won't be any worse than the prayer that my cousin Nick made in church on Sunday night,' says Rosie. She closes her eyes. '*We just pray indeed that you'll really just be with Malc as he just tries to just share with each and every one of us just exactly how we really need to live if we're not just going to just sit in a holy huddle, and just ignore the real world just around us, so really just be with Malc and indeed just help each and every one of us to just listen and really just hear what Malc just shares with us and just rejoice as he just.....*'

'I hate the modern linguistic ghost-train,' says Delia. 'The first-class carriage contains apparitions like *We need a separate cohort descriptor*, *We need to leveridge our strengths*, and *We need to achieve embeddedness*. The second-class carriage is full of ghouls like *That's a given* and *I know it's a big ask*. In the corridors there are horrors like *Be very afraid* and *It isn't rocket science*.' She pauses. 'Every seat in the third-class carriage is occupied by the word *just*.'

Take courage! We're going to follow Rosie's cousin on to the ghost-train of which Miss Benn has spoken. First Nick meets a fellow-student called Jasper.

'Hi, Jasp!'

'Hi, Nick.'

'This train seems to be where it's all happening.'

'Deaf innately.'

'So how are you, Jasp?'

Nick's word SO is impossible. When the word SO is properly used, it indicates a relation to some preceding statement of fact. Yet in the vulgar speech of today it is almost obligatory to begin a question with the ζ-like syllable SO.

Now Nick recalls how he conversed with his cousin.

Rosie was just sharing with me about where she's going tonight. I was like, 'So how are you?', and she was like, 'Very well, thanks!'; and I was like, 'So are you busy tonight?', and she was like, 'Yes, I'm going to the Gematria Club!'; and I was like, 'Right, well, I'll see you later!'.

'Let me translate four of Nick's expressions into English,' says Greta. 'ROSIE WAS JUST SHARING WITH ME means *Rosie was telling me*, I WAS LIKE means *I said*, SO means nothing, and SHE WAS LIKE means *she said*.'

Next we hear the five syllables of preternatural imbecility with which a languid student called Eileen Lane attempts to answer a question from Nick. (You may be unaware that the student journal *Headline Muser* is edited by Miss Lane.)

'What's wrong, Eileen?'

'I don't know – it's just.....'

Eileen's 'answer' is not a piece of rational human speech.

IT IS A COLLECTION OF MEANINGLESS ANIMAL NOISES.

Many of the phrases with which Miss Lane fills out her editorials are equally unworthy of praise. Poor Eileen! She has allowed her mind to be colonized by verbal parasites. In other words, she has learned the language of boobydom.

I CAN ASSURE YOU
BY THE SAME TOKEN
AT THIS POINT IN TIME
NOT FIT FOR PURPOSE
IN A VERY REAL SENSE
IN THE FINAL ANALYSIS
AT THE END OF THE DAY
IN NO UNCERTAIN TERMS
TO BE PERFECTLY HONEST
COMPLETELY AND UTTERLY
WHEN ALL IS SAID AND DONE
I CAN STATE CATEGORICALLY
LAST BUT BY NO MEANS LEAST
AS THEY KNOW ONLY TOO WELL
TO ALL INTENTS AND PURPOSES
THEY NEVER CEASE TO AMAZE ME
WE MUST REDOUBLE OUR EFFORTS
THE FATAL FLAW IN THIS SUGGESTION
IT DOES NOT SURPRISE ME IN THE LEAST
HE IS NOT SUGGESTING FOR ONE MOMENT
I SHOULD LIKE TO TAKE THIS OPPORTUNITY
THEY SHOULD HANG THEIR HEADS IN SHAME
NOTHING COULD BE FURTHER FROM THE TRUTH
I FEEL THAT THIS WOULD BE A RETROGRADE STEP
WHEN YOU LOOK AT THE REALITY OF THE SITUATION

Anyone who speaks or writes in the manner of Nick and Eileen should be forbidden to come out with the following sentence.

'I don't really think that a writer would do those things.'

For their part, people who speak or write in ponderous officialese are no more qualified than Eileen and Nick to say what a good writer would or would not do. Beware of any pompous desk-wallah who tries to make himself sound powerful by murdering language. The fatuous formality of such a person is *anti-human*.

Listen to the self-important chairman of a Sanitary Tissue Committee.

'As I have already INDICATED.....'

The speaker really means, 'As I've already SAID'.

Look at the top right corner of a brown envelope.

AFFIX
STAMP
HERE

The writer really means, 'STICK stamp here.' Only a mind of labyrinthine malignity will labour to avoid sensible honest words.

Look at an old university exam paper.

Candidates should answer either question 1 or question 2.

The writer really means, *YOU should answer*. How is a ten-letter noun better than a three-letter pronoun? (Never employ the reptilian formula *Those who wish*. Try to sound like a human being, and use a personal pronoun. *Say If you want.*)

We've nearly done. Let me address a genuinely wicked user of language.

.....PASSENGERS WHO WERE DESIGNATED MUSTER STATIONS IN THE AFT SECTION OF THE SHIP.....

Why use the obscure word DESIGNATED? You should say TOLD TO GO TO.

And what are MUSTER STATIONS? You may as well talk about *mustard plasters*. If you want to be understood, you'll say ASSEMBLY POINTS.

Then there's the maniacal word AFT. Only crossword-writers ever use the word EFT (= newt), and only sailors ever use the word AFT (= front).

When you're writing either an accident report or an emergency notice, DON'T USE OPAQUE LANGUAGE. In the latter case you may help to put human lives at risk. Use short words whenever you can. (Say PART, not SECTION.)

I wage continual war against the lictors of Lilliput by altering their notices.

~~ACCESS MAY BE GAINED AT REAR ENTRANCE~~

(Bufine buffoons! Will some kind anagrammatist lend me a eupnoeic whoosh?)

YOU CAN GET IN BY THE BACK DOOR.

Much of modern life is governed by frozen-faced official boneheads who appear to have learned their prose style from the Daleks. Such people cannot be allowed to pass judgment on creative literature. I mean, it would be absurd for some stamp-affixing access-gainer to come out with the following *quasi-sentence*.

‘Due to the unlikeliness of these things, no writer would do same.’

Enough! It’s five past eight. Having given us a valedictory smile, Mr Toad is leaving the restaurant. We’ll address ourselves to spring rolls and roast duck.

‘Yes, by Saint Anne,’ says Miss Benn, ‘and ginger shall be hot i’ the mouth too.’

Thirteen hours later, Delia phones me from her garden study.

‘Have you started your Song-of-Solomon poem yet, dear?’ she asks.

Oh, yes. In fact, I’ve finished it. (You see, I really want to help Lexis Picot. Ha, ha, ha.) The whole poem is about one person. As Robert de Montesquiou said,

*.....je compose comme Tibulle
Une élégie à Délia.*

Let me read you the poem before I collapse.

The Shulamite

(four and twenty honeyed lines to set before the queen!)
golden streamers burst from taut-encrowning sable band,
tossed about like willow-branches laughing through a storm:
lamps of lapis lazuli allure with azure light:

beryl chimney truly straight with trimly chiselled flues:
merry rim of ruby tinge around enamel tiles:
organ-pipe of ormolu ablaze in regal strength:
flashing rods of onyx barely fleshed above the hinge,

flexed in lithe entrancing ells of glad unflaunted length;
finely cloven ends adorned with panes of lucent horn:
pertly moulded corner-blocks of perfect opal glass:
pearly ridge in bold relief across a crystal field:

sable silk pagodas pull on vibrant motley cords:
monolith of coral pared away in fluent curves,
flaring wildly up and down like dream-begotten lyre:
jewel’s flaming lustre plays on flat celestial plain:

plaited girdle tied in gleeful loops on either side,
silver cees entwine on sable pennant’s airy silk:
blithe and lovely shafts of flint sublimely long and firm,
pure cylindral pillar-stems of slim and slender form:

shallow domes of shelly porcelain shield the dancing hinge:
noble level-fronted columns neatly carved below,
swelling out in grace behind like lofty-breasted vase:
cloven ends of amber wedges glazed with panes of horn.

I'm half-asleep, so I shan't multiply words. In chapter 31 we have met a number of persons who should warn us never to come out with the following sentence.

'I don't really think that a writer would do those things.'

These persons may be assembled under two main headings.

1. WHAT I DON'T KNOW ISN'T KNOWLEDGE

We began by meeting an Austrian scholar called Lars Ulrich von Wilhelminisch-Moewenlied who imagined that his knowledge of the English language empowered him first to understand the contents of technical books written in English, and secondly to say what those books should and should not contain.

Then we encountered a Hebraist called G G Simmons who talked in almost identical terms. Simmons knew very little about poetry, cryptography, mathematics and music. We found him preparing to read a poetic Hebrew text which involved cryptography, mathematics and music. We realized that G G Simmons was A QUADRUPLE LAYMAN.

We were entertained by three Stern Panjandrams whom we already knew to be QUADRUPLE LAYMEN.

We saw how the otherwise excellent Marjorie L Hoover and George Orwell made certain outrageous statements on the basis of insufficient knowledge.

We learned how the scientific community ignored the findings of Spallanzani and Jurine for ONE HUNDRED AND FORTY YEARS. (We also noted that the fantastic icons of Haeckelberry Fin are still being published in biology textbooks.)

We observed how some academics deliberately debauch certain words ('identify', 'prove', 'establish', 'declare', and 'pronounce') when they want to convert the mere opinions of their peers into oracles.

We heard how several runologists who never bothered to look at the Codex Runicus, in which the crossed L-rune appears *eleven times*, claimed that the crossed L-rune on the Kensington Rune Stone was the invention of an incompetent forger.

2. I DON'T KNOW HOW TO USE MY OWN LANGUAGE

We made the acquaintance of a professor who was happy to use sixteen commas in two sentences.

We were amused when a lawyer who believed in degrees of extremity revealed that he didn't understand his own syntax.

We critiqued the Juggernaut of Jargon who yesterday set off for the Venice Biennale with a tin of sardines in his suitcase.

We were introduced to Nick and Eileen, who understand words no more than a jackdaw understands a pair of scissors.

We were tormented by several pieces of ugly officialese.

Who can still be in doubt about my purpose? What are the *two facts* which reason itself has moved me to declare?

First, if the Biblical authors wrote about subjects and employed techniques of which I know nothing, then it is impossible for me to say,

‘I don’t really think that a writer would do those things.’

Secondly, if I am unable to write elegantly in my own language, then it is impossible for me to say,

‘I don’t really think that a writer would do those things.’

Listen to Bai Chuyi.

轉 軸 撥 絃 三 兩 聲

(= While turning the tuning-pegs, she played several notes on three strings).

Who knows what a disciplined musician would or would not do? Only a disciplined musician.

Listen to Li Shangyin.

斑 駝 只 繫 垂 楊 岸

(= I drop the reins of my black-and-white pinto over a willow on the river-bank).

Who knows what an expert horseman would or would not do? Only an expert horseman.

Well, then! Who knows what an informed and competent writer would or would not do? Please answer that question for yourself. I’ve been working all night, so I’m going outside to sleep in the sun. My merry unPlatonic dialogue is coming to an end. My merry unPlatonic muse is smiling at me from afar. And having summoned up all the doleful majesty of a great plucked crow, Dr Ferruginous Duck is glaring at me. Here’s why. I fear the LORD. I believe the Bible. I love chaste beauty. I hate madness and folly. I spit on the vacuous doctrines of Lilliput. Worst of all, I have written a book for people who like to read real books.

When Dr Duck reviews my work, he will deplore the absence of a foreword by Sir Hilton Popper, the philosophical hotelier. Then he will lament the absence of an index, and accuse me of idleness. Of course Dr Duck will be wrong. An index would horrify many wide-eyed gentlemen by containing twenty-four references to the name SCHIFFER. It would also allow idle persons to read the book on their own terms, which is unthinkable. Remember who is in charge. Either do what my loyal interlocutors do, and follow me over rough country, or stay at home.

Please don’t rebuke me for failing to include a multitude of footnotes in a literary book! Time makes ancient good uncouth. Those who expect us to maintain all the referential techniques of the past, in the face of the internet, may as well expect us to churn butter by hand. But hark! Dr Duck is muttering the word *bibliography*, whose two central letters stand for Own Goal. He and his colleagues need to stop writing enormous racist bibliographies which exclude the authors of northern Europe, eastern Europe, and China.

‘Cluck, cluck, cluck,’ cry the poor little creatures. ‘Cluck, cluck, cluck.’

Gentle reader, I salute you. You have done well to come so far. Chapter 32 begins on the following page. Promise to take a decent break before you read it.

CHAPTER 32: ALL THE LAND IS BEFORE THEE

MRS WHITEFIELDIt's a very queer world. It used to be so straightforward and simple; and now nobody seems to think and feel as they ought. Nothing has been right since that speech that Professor Tyndall made at Belfast.

George Bernard Shaw, *Man and Superman*

When you have read the Bible, you will know it is the Word of God.....

Woodrow Wilson

言 師 採 藥 去 (= He said, 'The teacher has gone to collect plants.')

Jia Dao

In three consecutive verses of Psalm 60, David mentions nine different PLACES.

God hath spoken in his holiness; I will rejoice, I will divide Shechem, and mete out the valley of Succoth. Gilead is mine, and Manasseh is mine; Ephraim also is the strength of mine head; Judah is my lawgiver; Moab is my washpot; over Edom will I cast out my shoe: Philistia, triumph thou because of me.

Many Christians who know nothing about the geography of the ancient Near East are happy to sing David's psalm in a metrical version.

*God in his holiness hath spoke;
Herein I will take pleasure:
Shechem I will divide, and forth
Will Succoth's valley measure.*

*Gilead I claim as mine by right;
Manasseh mine shall be;
Ephraim is of mine head the strength;
Judah gives laws for me;*

*Moab's my washing-pot; my shoe
I'll over Edom throw;
And over Palestina's land
I will in triumph go.*

Is it stupid for Christians to sing about places like *Shechem* and *Succoth* today? Or should a precentor point to the nine different places on a map while the congregation is singing?

No, and no. If David is at pains merely to record pieces of local geography, his purpose is frivolous. In fact, he is recording the direct speech of Almighty God. That makes a difference. It turns out that the terranean place-names of Psalm 60 represent nine particular heavenly bodies. One reader will be able to spell out a lot of modern lore on the knuckle-calendar of verses 8, 9, and 10.

DO MANASSEH AND PHILISTIA STAND FOR MARS AND PLUTO?

1. First, find out what the numbers 58.646, 115.88, and 87.969 have to do with Mercury. Secondly, find out what the numbers 243.019, 583.92, and 224.701 have to do with Venus. Then read Psalm 60. 8 (= AV 60. 6). Shechem is Mercury, and Succoth is Venus.

אלהים דבר בקדשו אעלזה אחלקה שכם ועמק סכות אמדד

God hath spoken in his holiness; I will rejoice, I will divide Shechem, and mete out the valley of Succoth.

The verse's nine Hebrew words have 400 gematric values respectively as follows.

86 206 412 113 144 360 216 486 49

$$8649 + 86 + 49 + 49862 = 58646, 60 + 214 + 11314 = 11588, 84612 + 2164 + 6 - 461 + 1648 = 87969$$

$$21 + 21648 + 216486 + 4864 = 243019, 64864 - 6498 + 26 = 58392, 21 + 6 + 216486 + 8649 - 461 = 224701$$

2. First, find out what the numbers 0.99727, 24, 86400, and 365.256 have to do with Earth. Secondly, find out what the numbers 1.025957, 779.96, and 686.972 have to do with Mars. Thirdly, find out what the numbers 9.925, 398.88, and 4332.59 have to do with Jupiter. Fourthly, find out what the numbers 10.57, 378.09, and 10759.22 have to do with Saturn. Then read Psalm 60. 9 (= AV 60. 7). Gilead is Earth, Manasseh is Mars, Ephraim is Jupiter, and Judah is Saturn.

לי גלעד ולי מנשה ואפרים מעוז ראשי יהודה מחקקי

Gilead is mine, and Manasseh is mine; Ephraim also is the strength of mine head; Judah is my lawgiver;

The verse's nine Hebrew words have 400 gematric values respectively as follows.

40 107 46 395 337 123 511 30 258

$$4639 + 95337 - 321 - 1 + 73 = 99727, 4 \times 6 = 24, -33 - 5 + 593 + 364701 = 365256$$

$$-37 - 3712 - 123511 + 1153217 = 1025957, 85203 - 5203 - 1 - 3 = 79996, 712351 - 23511 - 1532 - 321 - 15 = 686972$$

$$395 - 3 + 9533 = 9925, -37 - 3 + 395 + 39533 = 39888, 46 + 7 + 746 + 395337 + 37123 = 433259$$

$$1074 - 10 - 7 = 1057, 37123 + 712 - 32 - 1 + 7 = 37809, 1074639 + 533 + 712 + 1 + 37 = 1075922$$

3. First, find out what the numbers 0.71833, 369.66, and 30799.095 have to do with Uranus. Secondly, find out what the numbers 0.6713, 367.49, and 60190 have to do with Neptune. Thirdly, find out what the numbers 6.38723, 366.73, and 90613.305 have to do with Pluto. Then read Psalm 60. 10 (= AV 60. 8). Moab is Uranus, Edom is Neptune, and Philistia is Pluto. The Hebrew word סיר (= washpot) may anticipate both Ceres and Eris.

מואב סיר רחצי על אדום אשליך נעלי עלי פלשת התרועעי

Moab is my washpot; over Edom will I cast out my shoe: Philistia, triumph thou because of me.

The verse's ten Hebrew words have 400 gematric values respectively as follows.

49 270 308 100 51 361 160 110 810 761

$$-10 - 7 + 1670 + 70180 = 71833, 810 + 051 + 36116 - 011 = 36966, 100 + 30810051 - 10051 - 1005 = 30799095$$

$$6701 + 6 + 7 - 01 = 6713, 31500 + 5136 + 116 - 3 = 36749, -1 + 60110 + 81 = 60190$$

$$601108 + 36116 + 1500 - 1 = 638723, 31500 + 5136 + 1 + 36 = 36673, 49 + 92703081 - 2703081 + 614927 - 1670 - 1 = 90613305$$

A second reader will be struck by Psalm 60's nine twin-letter words, which add up.....

ללמד תשובב יין נתתה להתנוסס

ועננו אמדד מחקקי התרועעי

.....in 400, 22, 406, and 28 gematria respectively to 3600, 522, 7737, and 1293. (Should they be performed upon Gittith? 7737 - 3600 - 522 - 1293 = 54 x 43.) Notice that the holy-mountain sum of 3600 and 522 is 4122. It remains only to ask how many commentators have dealt with these nine pieces of language. And now I shall not say another word.

ללמד (Mercury) has 400, 22, 406, and 28 gematric values respectively of 104, 41, 672, and 132.

$$-32 - 1 - 2761 + 61440 = 58646, -132 + 3 + 12761 - 1044 = 11588, 72132 + 16721 - 721 - 167 + 4 = 87969$$

תשובב (Venus) has 400, 22, 406, and 28 gematric values respectively of 710, 53, 1602, and 153.

$$206135 + 35120 + 1602 + 2 + 160 = 243019, 53160 + 5316 - 3 - 61 - 20 = 58392, 2153 + 12 + 60 + 215371 + 7105 = 224701$$

יין (Earth) has 400, 22, 406, and 28 gematric values respectively of 70, 34, 146, and 74.

$$4 + 70341 + 34146 - 4764 = 99727, 4 \times 6 = 24, 14674 + 7470 + 70^3 - 34 + 146 = 365256$$

נתתה (Mars) has 400, 22, 406, and 28 gematric values respectively of 855, 63, 924, and 96.

$$924968 + 92496 + 8556 - 63 = 1025957, 85563 - 5563 - 5 - 5 + 6 = 79996, 694293 - 6942 - 392 + 4 + 9 = 686972$$

להתנוסס (Jupiter) has 400, 22, 406, and 28 gematric values respectively of 611, 89, 844, and 187.

$$81 + 9844 = 9925, 44898 - 6118 + 1189 - 81 = 39888, 144 + 441876 - 8761 = 433259$$

וענבו (Saturn) has 400, 22, 406, and 28 gematric values respectively of 182, 56, 366, and 132.

$$-132 + 1825 - 636 = 1057, 32182 + 5636 - 3 - 6 = 37809, [(132 - 23) \times (13 \times 2)] + [23 \times 1 \times 6^6] = 1075922$$

אמדד (Uranus) has 400, 22, 406, and 28 gematric values respectively of 49, 22, 1069, and 142.

$$69142 + 2106 + 601 - 10 - 6 = 71833, 41960 - 4922 - 2 - 1 - 069 = 36966, [96 + 9 + 6012] \times [4922 + 122 - 9] = 30799095$$

מחקקי (Neptune) has 400, 22, 406, and 28 gematric values respectively of 258, 69, 900, and 180.

$$-58 + 2 + 5869 + 900 = 6713, 96 + 685 + 25869 + 10099 = 36749, -9968 + 258 + 69900 = 60190$$

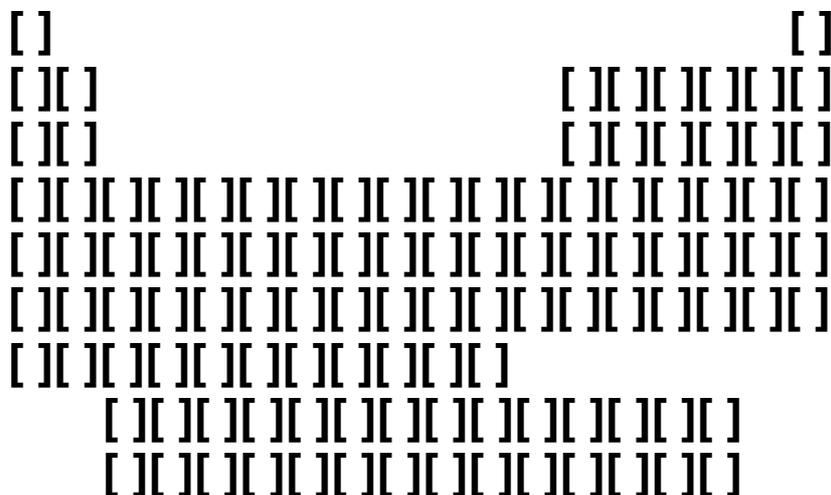
התרועעי (Pluto) has 400, 22, 406, and 28 gematric values respectively of 761, 95, 1214, and 197.

$$-97 - 197 - 7 + 61951 + 19512 = 638723, -195 + 12 - 5121 + 41977 = 36673, [761 \times 95 \times 1214] + [41 \times 41]^2 + 21414 = 90613305$$

A third reader will investigate *the sure mercies of David*. While the three Hebrew words חסדי דוד הנאמנים in Isaiah 55. 3 have 400 gematric values respectively of 82, 14, and 196, the five Greek words τα σσια Δαβιδ τα πιστα in Acts 13. 34 add up in 800 gematria to 1495 (= the 400 gematric value of I Kings 2. 10, and of the whole Hebrew alphabet). Note that 82 + 14 + 196 = 292, that 1495 - 292 = 1203, that 8214196 = [2 x 2 x 17 x 113 x 1069], and that [2 + 2 + 17 + 113 + 1069] = 1203.

A fourth reader will come to realize that the second is a temporal unit which humanity has discovered, and not devised. One year contains 31556926 seconds, or 365.242199 days. Note that 31556926 = [316³ + 2430], that [3163 + 2430] = [799 x 7], and that [799 + 7] = [365 + 242 + 199]. Note also that 2430 = [(3 x 1 x 6 x 3) multiplied by its own reversal], and that Psalm 84. 11 (= AV, verse 10) has a 400 gematric value of 3163.

After working meticulously with many numbers, a fifth reader will conclude that behemoth, the heavy-tailed recumbent beast of Job 40. 15-24, represents the periodic table of the elements. (Let me thank the laurel-clad Greta of page 673, whose question led me to walk down the chemistry corridor.) Take a look at behemoth. See if you can identify its nose, head, neck, legs, body, and tail.



Almighty God is the speaker in these verses, so there's no problem.

of Job 40. 25 (= 41. 1 in the AV). The number 2676 = [452 x 6] – [3 x 3 x 4] = by interpretation 4,336,254 read backward. The number 2605 = 5 x [530 – (9 x 1³)] = by interpretation 5,530,913. Notice that the same two-word command appears at the start of 40. 15 and at the start of 40. 16. Its 400 gematric value is 111. Oh, I should have told you that the heart of the leviathan is made up of anti-hydrogen, anti-oxygen, and anti-carbon. The other anti-elements run almost consecutively (start with an anti-helium ‘nose’, but keep anti-lanthanoids and anti-actinoids to the end). Is everyone happy?

‘I’m not exactly *happy*,’ says Lettuce Girl. ‘It makes me nervous to think of that great stealth bomber whizzing round the universe.’

Me too. But it makes me even more nervous to think that I’ve put it in my book. I wonder how readers will react to its presence. Here’s a single piece of advice. **WHEN YOU READ WHAT THE LORD SAYS ABOUT BEHEMOTH AND LEVIATHAN, TAKE NOTE OF THE METALS.** (Most elements are metals.) Behemoth needs fifty-one blank tiles, and leviathan needs one hundred and fifty blank tiles. A seventh reader may be able to work out why neither the 111 elements nor the 111 anti-elements may be accommodated in a nonagon which contains no blank tiles.

```

      x
     x x
    x x x
   x x x x
  x x x x x
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x x x x x x x
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  x x x x x x x x x
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      x x x x x x x x x x
       x x x x x x x x x
        x x x x x x x x
         x x x x x x x
          x x x x x x
           x x x x x
            x x x x
             x x x
              x x
               x

```

What does the future hold? Well, diligent researchers will come to learn new facts about the material universe by studying the Biblical text. In all kinds of areas, intelligent people will be led to change their minds.

Here is the wonderful thing about humanity. People *can* change. I mean to say, Prof. Antony Flew, who died in 2010, turned away from atheism in his last years. God is at work! While I write these words, Seth Prodie is kneeling on a garage floor, and asking the LORD to save his soul. For the rest of his life he will serve God by repairing damaged lives in a spirit of quiet goodness. And who knows? In the near future several persons who are better known than Seth Prodie may be led to consider the Bible with their minds wide open. If God helps them, such persons may in time write books that will strengthen the Christian church.

The same goes for many persons of whom the world has not yet heard. *You* could be one of those persons. Presently you may be in your teens, or you may be in your sixties. Fear not! If you put yourself in the LORD’s hands, you will begin to discover things about creation, and language, and consciousness. I’m not a terribly clever person, and I’ve been allowed to find out quite a lot in the course of the last two decades. I’ve also been allowed to contend with scholars like Dr Sharp, Dr Flat, and Dr Natural. Let me not waste words on their scholarship. The Dutch writer Jan van der Noot is remembered for his *Ode*

Teghen d'Onwetende Vyanden der Poëteryen (= Ode against the ignorant enemies of poetry). He can speak for me. So can the Chinese poet Yuan Jie.

山 林 二 十 年 (= Mountains, forests, twenty years).....

So can the Mongolian poet Gunaajav Ayurzana.

«Хавар айсүй».....
Улам өвөл...

“Spring is coming”.....
More winter...

So can the Ossetian poet Kosta Khetagkati.

ХЪЫЗТ ЗЫМÆГ, ТЫХСТ ЗЫМÆГ (= Hard winter, harsh winter).

And so in a rather rascally rendering can the Vietnamese poet Nguyễn Du.

筭 才 筭 命 審 罨 悒 饒 (= Intellect is at war with the settled world).

It is true that I've had to work hard. You'll have to do the same. Pindar says,

απονον δ' ελαβον χαρμα παυροι τινες

(= Few have won a triumph without hard work).

Work hard at the Bible, and see what happens. Be careful how you conceive of triumph. A real scholar is concerned to triumph not over his ignorant enemies, but over his own ignorance. (Does anyone want *public attention*? How marvellously vulgar!) Study for at least three years before you think of publishing anything. Be warned by the Romansh poet Peider Lansel.

O sblacha fluoretta,
tu vainsch massa bod!

O pale little flower,
You appear too soon!

Of course you can patent important discoveries by posting them on a website. When at length you publish your findings in a book, be prepared for hostile criticism. As Delia would say, the hideous messengers of the Lord of Death will beat and stab you. Even if the pundits of chapter 31 hold their peace, rubber-duck scholars like Dr Nine-o'-Spades and Dr Spadonine, WHO HAVE NEVER FOUND OUT ANYTHING, will deplore the unscholarly manner in which you report your findings. 'Cluck, cluck, cluck,' the poor little creatures will cry. 'Cluck, cluck, cluck.' Ignore the rebukes of these losers. At the same time, be grateful to the genial scholars who genuinely correct you. Remember Proverbs 12. 1. Whoso loveth instruction loveth knowledge: but he that hateth reproof is brutish.

Beware of institutions, even if they have the word *Bible* in their titles. Don't be afraid to study the Scriptures on your own. You can do what many people do: use the AV as your basic text, and refer to other translations when you need a bit of help. Forget about abstract nouns. Look for real things. Buy only those commentaries that *deserve* to be bought. (Call to mind the lesson of chapter 31. If you can't tell a number one wood from a sand wedge, you have no right to comment on a golfer's choice of clubs. Likewise, if you can't write elegant English, you have no right to comment on finely crafted ancient literature.) Buy a four-volume Baker Books set of *The Fundamentals*, a legible non-micrographed version of Clarence Larkin's *Dispensational Truth*, a Hebrew Bible, a Greek New Testament, Bagster's *Analytical Hebrew and Chaldee Lexicon*, Bagster's *Analytical Greek Lexicon*, Jay P Green's one-volume *The Interlinear Bible*, and a magnifying glass at least five inches in diameter.

Look for useful resources on the internet. Bookmark Dr Neil J A Sloane's *On-Line Encyclopedia of Integer Sequences*; Mr Richard Amiel McGough's *Bible Wheel* site; Bibal.net; the Center for Literate Values; the Unbound Bible; Dr Charles Missler's site *khouse.org*; and Strong's Concordance.

Study out of doors whenever you can. Stay close to the real things that God has made: sun, moon, stars, planets, clouds, rain, wind, ice, snow, streams, rivers, ponds, lakes, oceans, mountains, meadows, marshes, earths, rocks, pebbles, gems, shells, trees, bushes, grasses, ferns, herbs, flowers, insects, birds, bats, whales, fish, frogs, beavers, badgers, hedgehogs, cows, sheep, goats, pigs, and hens. Here are ten words from the seventeenth verse of Psalm 104 (AV).

.....as for the stork, the fir trees are her house.

How can you construe those words if you have no interest in storks or fir trees?

Be sensible when you're using gematric computer-tools. Some gematrists who whiz all round the Bible on their computers never engage reverently with the Biblical text. Gematria is not the point of everything. Neither is cryptanalysis! The important messages of the Bible were written in plain language so that ordinary men and women like you and me would be able to understand them.

| |
|--|
| <p>IN THE BEGINNING GOD CREATED THE HEAVENS AND THE EARTH. ALL HAVE SINNED, AND COME SHORT OF THE GLORY OF GOD. BELIEVE ON THE LORD JESUS CHRIST, AND THOU SHALT BE SAVED.</p> |
|--|

Melodies characterized by wide leaps, arpeggiated passages, tritones, and polymetricity are found both in the ancient music of Israel and in the early music of Iceland. David uses a minor seventh in Psalm 124 (below, left, notes 8-9), and so does the composer of *Ó guð, ó Jesú Kristi* (below, right, notes 5-6).



Furthermore, something very like the Alamoth and Sheminith organum of ancient Israel has survived down to modern times in Icelandic *tvísöngur*. Let me add that early Iceland had not only a parliamentary 'Feast of Booths', but also a shoe-based legal ceremony which reminds us of Deuteronomy 25. 9 and Ruth 4. 7. [If you're interested, see in the first place Cleasby, Vigfússon, and Craigie, *An Icelandic-English Dictionary* (Oxford, 1975), 18b-19a, 88, 255b]. One day these facts will be explained by a scholar who knows a lot more than I do.

In the meantime, musically competent readers who have worked their way through chapters 14, 15, 16, and 17 will be able to search the Hebrew text of the Psalter for melody, harmony, and counterpoint. They will find every number of David's musical system encrypted in the 400 gematria of both II Samuel 1. 18 and I Chronicles 25. 5. (After studying the panels on page 356, they should turn to page 586, and note the manner in which Delia derives musical numbers from Genesis 1. 1.) They will find a tune in Psalm 90. Before long they will be able to transcribe musical compositions that appear outside the Psalter (Jonah 2. 3-10 [= 2. 2-9 in the AV], Jonah 4. 2-3, Habakkuk 3. 1-19, and so on).

Then they will be emboldened to look for music in the New Testament.

Here is a wonderful fact. The Greek alphabet of twenty-four letters allows a composer to endow every note of an eight-note scale with one, or two, or three beats. The white-note scale of D may be notated as follows.

alpha = 1-beat d, beta = 1-beat e, gamma = 1-beat f, delta = 1-beat g,
 epsilon = 1-beat a, zeta = 1-beat b, eta = 1-beat c', theta = 1-beat d'
 iota = 2-beat d, kappa = 2-beat e, lambda = 2-beat f, mu = 2-beat g,
 nu = 2-beat a, xi = 2-beat b, omicron = 2-beat c', pi = 2-beat d'
 rho = 3-beat d, sigma = 3-beat e, tau = 3-beat f, upsilon = 3-beat g,
 phi = 3-beat a, chi = 3-beat b, psi = 3-beat c', omega = 3-beat d'

If you like you can transcribe the song of the angels from Luke 2. 14. Use the first letters of the eleven Greek words as melodic notes. There are twenty-three syllables, so you'll have to stop on the note that you started on. Once you've extracted the melody, harmonize it in each of the two four-part Davidic manners (melody + Alamoth + Sheminith + Shalishim, and Gittith).

'I can't believe what I'm hearing,' says Mr X from chapter 17. 'Are you trying to tell me.....'

No, I'm not trying to tell *you* anything. I'm telling my musical readers how they can turn a piece of the Greek New Testament (like Luke 1. 46-55, or Luke 2. 14, or Ephesians 5. 14, or Philippians 2. 5-11, or the first six words of I Peter 5. 13) into four-part concord. That's all. Now let me continue.

If you have enough people, you can perform the song of the angels six times: once at male pitch, once at female pitch, and once with full forces, in each of the two harmonic manners. Your four groups of musicians should occupy the four corners of whatever room they perform in.

MELODY, ALAMOTH, SHEMINITH, and SHALISHIM

| | | | | | | | | | |
|------|-------|----------|-------|----------|-------|----------|-------|--------|--|
| T | | | | | | | | | |
| R | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | |
| E | | | | | | | | | |
| B | ----- | 3----- | ----- | 2----- | ----- | ----- | ----- | 1----- | |
| L | | | | 2 | | | | 1 | |
| E | ----- | 2&3----- | ----- | 4----- | ----- | 1----- | ----- | 4----- | |
| C | | 2 | | 3&4 | | 1 | | 4 | |
| L | ----- | 4----- | ----- | 1&3----- | ----- | 4----- | ----- | 2----- | |
| E | | 4 | | 1 | | 3&4 | | 2 | |
| F | ----- | 1----- | ----- | ----- | ----- | 2&3----- | ----- | ----- | |
| 8ve | | 1 | | | | 2 | | 3 | |
| down | | | | | | | | -3- | |

GITTITH

| | | | | | | | | | | |
|------|--------|-------|--------|--------|--------|-------|-------|--------|-------|-------|
| T | | | | | | | | | | |
| R | ----- | | | | | | | | | |
| E | | 4 | | | | | 2 | | | |
| B | -----4 | ----- | -----4 | -----2 | ----- | ----- | ----- | -----1 | ----- | ----- |
| L | | 3 | 4 | | | | | 1 | | |
| E | -----3 | ----- | -----3 | -----1 | ----- | ----- | ----- | ----- | ----- | ----- |
| C | | 2 | 3 | | | 1 | | | 2 | |
| L | -----2 | ----- | -----1 | -----3 | -----2 | ----- | ----- | ----- | ----- | ----- |
| E | | | 1 | | | 3 | | | 3 | |
| F | -----1 | ----- | ----- | -----4 | -----3 | ----- | ----- | ----- | ----- | ----- |
| 8ve | 1 | | | 2 | 4 | | | | 4 | |
| down | | | -2- | | | | | -4- | | |

By using the English letters from A to X in the melodic manner of the Greek alphabet (while allowing Y to denote four-beat *d*, and Z to denote four-beat *d'*), you can turn any English text into a tune. Try notating the first letters of words, then the last letters, then alternate first and last letters. In time you can apply David's two systems of four-part harmony to your own melodies. A simple computer programme will allow you to harmonize in four parts any melody built from the eight notes *d e f g a b c' d'*. You can teach Davidic harmony to children. You can even perform Davidic music with four groups of descant recorders, provided that you place each group in its own corner of the hall. Who knows? When you stand in the middle of that hall, you may be led to perceive, like one who dreams, a piece of truth about the musical universe. But let us move on. Humour me for a while by taking part in the combinafrolics of an eight-part dream from which decimal points will be excluded.

1. Combine the values of six important numbers.

The four-digit square root of two is 1414.

The eight-digit twelfth root of two is 10594631. When it is folded up in the manner of a penknife, it becomes [1059 + 4631] = 5690.

Four-digit *pi* is 3142, four-digit *e* is 2718, four-digit *phi* is 1618, and the four-digit value of one value for *i* to the power *i* is 2079.

Seven four-digit groups -- 1414, 1059, 4631, 3142, 2718, 1618, and 2079 -- constitute 'the seven pillars of Wisdom'. You'll find the sum of these pillars gematrically encrypted several times in the SIX Hebrew words of Proverbs 9. 1. Leaving aside what I wrote on page 560, look at the 400 gematric values of the six words (474, 457, 417, 105, 135, and 377). Then watch.

$$17105 - [444, \text{ or } -31 + 475] = 16661 \quad 113 = [56 + 45 + 12], \text{ and } [5^6 + 4^5 + 12] = 16661$$

There is a summer holiday's work in Proverbs 9. 1 for a couple of interested readers.

$$1414 + 5690 + 3142 + 2718 + 1618 + 2079 = 16661$$

Let us allow the number 16661 to represent *mathematics*.

2. Combine the ten unitary string-lengths which correspond respectively to the ten musical notes c, d, e, f, g, a, b, c', d', and e'.

| | |
|--|----------|
| THE c STRING IS 972 UNITS LONG. | [-----o] |
| THE d STRING IS 864 UNITS LONG. | [-----o] |
| THE e STRING IS 768 UNITS LONG. | [-----o] |
| THE f STRING IS 729 UNITS LONG. | [-----o] |
| THE g STRING IS 648 UNITS LONG. | [-----o] |
| THE a STRING IS 576 UNITS LONG. | [-----o] |
| THE b STRING IS 512 UNITS LONG. | [-----o] |
| THE c' STRING IS 486 UNITS LONG. | [-----o] |
| THE d' STRING IS 432 UNITS LONG. | [-----o] |
| THE e' STRING IS 384 UNITS LONG. | [-----o] |

$$972 + 864 + 768 + 729 + 648 + 576 + 512 + 486 + 432 + 384 = 6371$$

The ten natural or untempered musical notes add up to 6371. Let us allow the number 6371 to represent *untempered musical notes*.

Notice that $6371 = [23 \times 277]$, and that $[2 \times 3 \times 2 \times 7 \times 7] = [3 \times 14^2]$.

3. Combine the unitary string-lengths which correspond to the different notes of David's 'MASSive' harmonic system.

The eight melodic scale-notes d, e, f, g, a, b, c', and d:

$$864 + 768 + 729 + 648 + 576 + 512 + 486 + 432 = 5015$$

The eight Alamo scale-notes a, b, c', d', d, e, f, and g:

$$576 + 512 + 486 + 432 + 864 + 768 + 729 + 648 = 5015$$

The eight Sheminith scale-notes d', b, a, g, f, e, c, and d:

$$432 + 512 + 576 + 648 + 729 + 768 + 972 + 864 = 5501$$

The four Shalishim scale-notes f, g, a, b:

$$729 + 648 + 576 + 512 = 2465$$

All four scales (5015, 5015, 5501, and 2465) add up to 17996. If you add on the eight notation-numbers 69, 81, 93, 114, 135, 246, 357, and 400, you will encapsulate David's four-part harmonic system in one number.

$$17996 + [69 + 81 + 93 + 114 + 135 + 246 + 357 + 400] = 19491$$

When the seven Hebrew words of Genesis 1. 1 are numerated in terms of the 400, 22, 406, and 28 numerical alphabets, their twenty-eight gematric values add up to 9329. You may be interested to observe that $9329 = [19 \times 491]$.

$$[913 + 203 + 86 + 401 + 395 + 407 + 296] + [76 + 23 + 41 + 23 + 62 + 29 + 44] + [1819 + 1033 + 301 + 517 + 566 + 529 + 731] + [208 + 115 + 121 + 58 + 143 + 70 + 119] = 9329$$

Let us allow the number 19491 to represent *musical harmony which involves the dimension of time*.

4. Combine the seventeen unitary string-lengths which correspond respectively to the seventeen equal-tempered musical notes c, c#, d, d#, e, f, f#, g, g#, a, a#, b, c', c#', d', d#', and e'.

| | |
|---|----------|
| THE C STRING IS 970 UNITS LONG. | [-----o] |
| THE C# STRING IS 916 UNITS LONG. | [-----o] |
| THE D STRING IS 864 UNITS LONG. | [-----o] |
| THE D# STRING IS 816 UNITS LONG. | [-----o] |
| THE E STRING IS 770 UNITS LONG. | [-----o] |
| THE F STRING IS 727 UNITS LONG. | [-----o] |
| THE F# STRING IS 686 UNITS LONG. | [-----o] |
| THE G STRING IS 647 UNITS LONG. | [-----o] |
| THE G# STRING IS 611 UNITS LONG. | [-----o] |
| THE A STRING IS 577 UNITS LONG. | [-----o] |
| THE A# STRING IS 545 UNITS LONG. | [-----o] |
| THE B STRING IS 514 UNITS LONG. | [-----o] |
| THE c' STRING IS 485 UNITS LONG. | [-----o] |
| THE c#' STRING IS 458 UNITS LONG. | [-----o] |
| THE d' STRING IS 432 UNITS LONG. | [-----o] |
| THE d#' STRING IS 408 UNITS LONG. | [-----o] |
| THE e' STRING IS 385 UNITS LONG. | [-----o] |

$$970 + 916 + 864 + 816 + 770 + 727 + 686 + 647 + 611 \\ + 577 + 545 + 514 + 485 + 458 + 432 + 408 + 385 = 10811$$

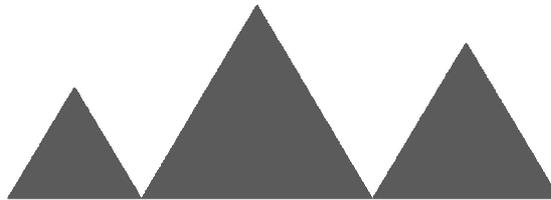
Let us allow the number 10811 to represent *tempered musical notes*.

Notice that $10811 = [19 \times 569]$, and that $[19 + 569] = [3 \times 14^2]$. Notice also that Sargon II's gematric number is 16283, and that $[1 \times 6283] + [16 \times 283] = 10811$. Finally, notice that $10811 - [10 \times 811] = 2701$.

5. Combine the three peaks of the holy mountain and the three peaks of its reflection.

The holy mountain in heaven adds up to 4122, and it is composed of three triangular-number peaks.

THE HOLY MOUNTAIN IN HEAVEN



The triangular numbers of 39, 63, and 51 are respectively 780, 2016, and 1326.

$$780 + 2016 + 1326 = 4122$$

You remember how the number 4122 'changes shape' three times so as to generate its own reversal.

$$[4 \times 122] + [14 \times 22] + [412 \times 2] = 2214$$

And you recall that the number 2214, like its reversal, is made up of three triangular-number peaks.

THE REFLECTION OF THE HOLY MOUNTAIN ON EARTH



The triangular numbers of 26, 54, and 27 are respectively 351, 1485, and 378.

$$351 + 1485 + 378 = 2214$$

All six peaks add up to 6336.

$$780 + 2016 + 1326 + 351 + 1485 + 378 = 6336$$

Let us allow the number 6336 to represent *all six peaks of the holy mountain and its reversal*.

6. Combine the sum of the four numerical alphabets and the sum of the four alphabetical rivers in a single number.

The 400 alphabet adds up to 1495.

$$\begin{aligned} & \text{א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת} \\ & 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 20 + 30 + 40 \\ & + 50 + 60 + 70 + 80 + 90 + 100 + 200 + 300 + 400 = 1495 \end{aligned}$$

The 22 alphabet adds up to 253.

$$\begin{aligned} & \text{א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת} \\ & 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 \\ & + 14 + 15 + 16 + 17 + 18 + 19 + 20 + 21 + 22 = 253 \end{aligned}$$

The 406 alphabet adds up to 4249.

$$\begin{aligned} & \text{א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת} \\ & 111 + 412 + 83 + 434 + 6 + 12 + 67 + 418 + 419 + 20 + 100 + 74 + 90 \\ & + 106 + 120 + 130 + 81 + 104 + 186 + 510 + 360 + 406 = 4249 \end{aligned}$$

The 28 alphabet adds up to 712.

$$\begin{aligned} & \text{א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת} \\ & 30 + 34 + 38 + 38 + 6 + 12 + 31 + 40 + 41 + 20 + 28 + 29 + 36 \\ & + 34 + 39 + 40 + 18 + 32 + 42 + 51 + 45 + 28 = 712 \end{aligned}$$

You recall how the four rivers have numerical values as follows.

PISHON in 400 gematria

$$\text{פישון} \quad \text{pe-yodh-shin-wau-nun} \quad (80 + 10 + 300 + 6 + 50) \quad = \quad 446$$

GIHON in 22 gematria

$$\text{גיחון} \quad \text{gimel-yodh-cheth-wau-nun} \quad (3 + 10 + 8 + 6 + 14) \quad = \quad 41$$

HIDDEKEL in 406 gematria

$$\text{חדקל} \quad \text{cheth-daleth-qoph-lamedh} \quad (418 + 434 + 186 + 74) \quad = \quad 1112$$

EUPHRATES in 28 gematria

$$\text{פרת} \quad \text{pe-resch-tau} \quad (18 + 51 + 28) \quad = \quad 97$$

$$[1495 + 253 + 4249 + 712] + [446 + 41 + 1112 + 97] = 8405$$

The river-alphabets of language and notation add up to give the number 8405. Let us allow the number 8405 to represent *language*.

Now look at the eight combination-numbers which we have used to represent particular heavenly and earthly things.

16661 represents **MATHEMATICS**, and we'll call it **A**.

6371 represents **UNTEMPERED MUSICAL NOTES**, and we'll call it **B**.

19491 represents **HARMONY**, and we'll call it **C**.

10811 represents **TEMPERED MUSICAL NOTES**, and we'll call it **D**.

6336 represents **THE HOLY MOUNTAIN**, and we'll call it **E**.

8405 represents **LANGUAGE**, and we'll call it **F**.

1000 represents **TIME**, and we'll call it **G**.

3962 represents **CHEMISTRY**, and we'll call it **H**.

These eight numbers are involved in a 'gearbox of the universe' that contains twenty-one REVERSIBLE NUMERICAL GEARS.

Look carefully at the numerical form of each gear.

$$A = 16661$$

$$C = 19491$$

$$E = 6336$$

$$A + B = 23032$$

$$A + D = 27472$$

$$D + G = 11811$$

$$E + F = 14741$$

$$B + C + G = 26862$$

$$B + E + F = 21112$$

$$D + E + F = 25552$$

$$A + B + D + G = 34843$$

$$A + B + E + F = 37773$$

$$A + C + G + H = 41114$$

$$B + C + D + G = 37673$$

$$A + B + D + E + F = 48584$$

$$B + D + E + F + G = 32923$$

$$A + C + E + F + G + H = 55855$$

$$C + D + E + F + G + H = 50005$$

$$A + B + C + E + F + G + H = 62226$$

$$A + C + D + E + F + G + H = 66666$$

$$A + B + C + D + E + F + G + H = 73037$$

Here is the gearbox.

13
12 14
11 03 15
10 16
09 02 01 04 17
08 18
07 05 19
06 20
21

Here it is again with the cover removed.

37673
34843 37773
32923 14741 41114
27472 48584
26862 11811 6336 16661 50005
25552 55855
23032 19491 62226
21112 66666
73037

AND NOW, IN CONCERT HALLS, THE UNIQUE TALL RADIANCE

Last night Lettuce Girl, clad in a costume of leafy green, performed on twelve borrowed instruments at a recital in Belfast. Behind her performance there lie six hundred hours of practice, spread over the last fourteen months. As an encore Jane sang a melody which her accompanist had composed for the occasion. That melody drew on the note 864 *d*, the note 432 *d'*, the 400 Hebrew alphabet, the Hebrew text of Genesis 1. 1, and the Greek text of John 1. 1.

Now attend. Until he read my last paragraph, Ignatius Cobe assumed that Miss Dascey was a mad borrower of instruments, and that I was a foolish recorder of trivialities. Behind Cobe's assumption there lie sixty years in which he has resolutely refused to study world literature. It never occurred to Cobe that Jane had a good reason for borrowing instruments, or that I had a good reason for telling you exactly what she borrowed. Every time Jane rang my doorbell, Cobe snorted angrily. He couldn't see what was going on, so he decided that nothing was going on. The doll's house of academe is well furnished with Cobes.

Whittaker Fox is a literate man who is happy to say very little. I have allowed him to represent the silent reader of my tale. You ask why I have employed four lady friends as chief interlocutors. I'll tell you. My sternest critics, all of them male, are triple and quadruple laymen. Delia Benn, Rosie Stone, Jane Dascey, and Greta Hegans are genuinely diligent scholars. Of course they study the life of particular ponds. They also wade through rivers, and swim in the sea. Instead of watching television and going to pubs, they read books, learn languages, play instruments, add up numbers, take part in sports, make things with their hands, tend their gardens, and live joyfully in the outdoor world. Educationists will robotically chant the lie that learning one thing doesn't help you to learn another thing, but then educationists are content if the positive self-esteemers whom they produce are able to make posters for Globate Awareness Week.

'In 800 English gematria,' Jane whispers, 'the names of my twelve instruments add up to a palindrome!' (*Her instruments, sez she. I'm starting to get worried.*)

$$[403 + 1096 + 297 + 396 + 1376 + 1100 + 249 + 1767 + 700 + 741 + 169 + 825] = 9119$$
$$9119 = [864 + 432 + 1495 + 2701 + 3627]$$

Let me print one riddle for a third time. The 115-letter *text* of Jane's encore-song anagrammatized the names of twelve instruments, and alluded subtextually to a Biblical verse. Some readers wonder if I mean valve trombone, auoi, Mongolian fiddle, lyra viol, quintern, bass gemshorn, guitar, vielle, bombarde, crwth, panpipe, and Aeolian wire harp, plus the phrase YE REMIT, which appears in John 20. 23 (AV). In fact I mean *er hu*, baroque violin, *langspil*, alto rebec, five-string viola, marine trumpet, mandoline, bowed psaltery, viola d'amore, Bohemian wing, harp, and lyre. Plus Acts 14. 21, which in 800 Greek gematria adds up to 9119.

Are we all born to invest
In the quivering dive of a gold-mine?
I burn a warmer lamp;
I support a chapel bell.
I'm a yodeller, too:
I sing brave harmony.

Julia's 108-letter poem (see page 496) uses the letters of Jane's 115-letter poem, minus EEIMTRY. See if you can combine the two poems and the names of the two poets in a gematric equation so as to encrypt the name of a third author. Always be on the look-out for authorial purpose. In an earlier age Cobe-like scientists described many organs as 'vestigial'. Nowadays we know better.

Enough! Leave the number 9119, and look at the number 73037. You can see how 73 and 37 (the prime factors of Genesis 1. 1's 400 gematric value) appear in the twenty-first gear, which embraces all eight of our representative numbers. 73037 is a little hall of figurate mirrors in its own right. Note that 23005 is the triangular number of 214, and that 21025 is the square of 145.

$$23005 + \text{its reversal } 50032 = 73037 = 21025 + \text{its reversal } 52012$$

'Here's what I'm wondering,' says Lettuce Girl. 'What happens when you add up the whole gearbox?'

Something remarkable! Let's work out the sum of all twenty-one numbers.

$$[6336 + 11811 + 14741 + 16661 + 19491 + 21112 + 23032] = 113184$$

$$[25552 + 26862 + 27472 + 32923 + 34843 + 37673 + 37773] = 223098$$

$$[41114 + 48584 + 50005 + 55855 + 62226 + 66666 + 73037] = 397487$$

$$[113184 + 223098 + 397487] = 733769$$

Once again the seventy-three and thirty-seven of Genesis 1. 1 insist on making an appearance. The sixty-nine which follows them may be read as the 400 gematric value of ג'דן (= the governor).

7337 69

What is the message? That the Governor of the universe is altogether distinct from his creation. There's an important message for pantheists. Very good. But a number in our implicate universe can be a mercurial thing. (Yesterday it behaved like a lava-lamp. Today it behaves like a kaleidoscope. Tomorrow it may behave like Delia Du Sol, the celebrated contortionist, who last appeared on page 36. Numbers are able to dance.)

When you first meet the number 733769, you construe it as a combination of 7337 and 69. You go on to discover that the three prime factors of 733769 (23, 61, and 523) add up to give 607, the 111th prime number. Then you find that $733769 = [90^3 + 69^2 + 2^3]$, and that $[903 + 692 + 23] = 1618$.

Suddenly, for no reason, you find yourself reading the number 733769 as a combination of 733 and 769.

733 769

One part of your intellect which likes to compress and concentrate things addresses itself to the number 733769. You consider the fact that 733769 in base 33 is KDQE. Well, those four letters might keep Don Quixote entertained, but they are not enchantingly memorable in themselves. You wonder if it's possible to express 733769 in terms of four *digits*. Before long the mirthful emirps begin to chirp in the mirrored chambers of your mind.

An 'emirp' is a prime whose reversal is a different prime. Here are the first twenty-eight emirps.

- | | | | | | | |
|----------------|-----------------------|----------------|----------------|----------------|----------------|-----------------------|
| 1. 13 | 2. 17 | 3. 31 | 4. 37 | 5. 71 | 6. 73 | 7. 79 |
| 8. 97 | 9. 107 | 10. 113 | 11. 149 | 12. 157 | 13. 167 | 14. 179 |
| 15. 199 | 16. 311 | 17. 337 | 18. 347 | 19. 359 | 20. 389 | 21. 701 |
| 22. 709 | 23. <u>733</u> | 24. 739 | 25. 743 | 26. 751 | 27. 761 | 28. <u>769</u> |

You notice that 733 is the twenty-third emirp, and that 769 is the twenty-eighth emirp. Now you reckon that the primes are related to the most fundamental level of existence, and you suspect that the emirps are distant cousins of the twenty-one reversible numerical gears, so after allowing emirp 23 to represent 733, and emirp 28 to represent 769, you concatenate the two representative numbers.

$$733769 = \text{by interpretation } 2328$$

The number 2328 takes you back to the riddle of Psalm 49. 4-5. You recall the 22 gematric values of the riddle's twelve Hebrew words.

$$[27 \ 36 \ 60 \ 42 \ 24 \ 72] \quad [15 \ 58 \ 32 \ 48 \ 53 \ 54]$$

And you know what happens when we allow the 22 gematric values of the riddle's twelve words to represent the place values of prime numbers.

- | | |
|---|---|
| The 27 th prime number is 103. | The 15 th prime number is 47. |
| The 36 th prime number is 151. | The 58 th prime number is 271. |
| The 60 th prime number is 281. | The 32 nd prime number is 131. |
| The 42 nd prime number is 181. | The 48 th prime number is 223. |
| The 24 th prime number is 89. | The 53 rd prime number is 241. |
| The 72 nd prime number is 359. | The 54 th prime number is 251. |

$$103 + 151 + 281 + 181 + 89 + 359 = 1164$$

$$47 + 271 + 131 + 223 + 241 + 251 = 1164$$

What is the message of the two 1164s? That the Redeemer has balanced the books of the universe. That he has achieved a perfect reconciliation between God and man at the most fundamental level of existence. The universe of which our Lord Jesus Christ is both the Creator and the Redeemer may be represented by the sum of the two 1164s.

$$[1164 + 1164] = 2328 \quad (\text{Note that } 1164 \text{ in base } 8 \text{ is } 2214.)$$

2328 is the four-digit number which we used to represent the gear-box total of 733769. The number 2328 speaks of a creation that was designed for redemption. Before the Son of God created the world, he was ordained to be its Redeemer. When we interpret the number 2328 as $[23 \times 28]$ we get 644, the 800 Greek gematric value of Εμμανουηλ (= Emmanuel). Let us break for a moment.

TWO LADY COATMAKERS: HANNAH AND DORCAS

Sat-temple-woman-go (I Samuel 1. 9, 15, 17)

Temple-sat-woman-go (John 8. 2, 3, 11)

What did the Lord Jesus write on the ground in John 8. 6, 8? We don't know. But in 800 Greek gematria the words τῷ δακτυλῷ ἐγράφεν εἰς τὴν γῆν from John 8.6 (= *with his finger wrote on the ground*) tally with the 400 Hebrew gematric value of Samuel 1. 16, and in 800 Greek gematria the words ἐγράφεν εἰς τὴν γῆν from John 8. 8 (= *wrote on the ground*) tally with the 400 Hebrew gematric value of I Samuel 2. 6. An unhappy Hannah speaks in I Samuel 1. 16, while a happy Hannah speaks in I Samuel 2. 6. Look up all four texts in the original. Then see if you can make sense of a gematric equation. Note: the vocative expression Ἡ γυνὴ represents a unique New Testament usage, and so does the word μαθητρία.

$$\text{Ἡ γυνὴ (John 8. 10: 'Woman')} = \text{μαθητρία (Acts 9. 36: '[female] disciple')}$$

COMPACTED BY THAT WHICH EVERY JOINT SUPPLIETH

1728 is the cube of twelve, while 1.732 is the four-digit value of the square root of three. John 1. 1 adds up to 39 x 93 in 800 Greek gematria. 2.598 is the four-digit unitary value of the area of a regular hexagon of which every side is one unit long, and of which every angle is 120 degrees. Forgetting about decimal points, see if you can recognize all the numbers that participate in the following equations.

$$\begin{aligned}
 &3142 - 1728 = 1414 \quad 5690 - 1728 = 3962 \quad 2079 + 545 + 1369 = 3993 \\
 &2598 = [864 + 432] + [31 \times 42] \quad 2598 + [17 \times 32] = 3142 \quad 2598 + 120 = 2718 \\
 &2598 + 3773 = 6371 \quad [17 \times 32] = [136 \times 4], \text{ and } 1364 + 2598 = 3962
 \end{aligned}$$

Genesis 1. 1 contains seven Hebrew words. In 400 gematria the first word has a value of 913, the fourth or middle word has a value of 401, and the last word has a value of 296. (The second, third, fifth, and sixth words have values respectively of 203, 86, 395, and 407. Remember that 3546 is the total 400 gematric value of Genesis 1. 2.)

$$913 + 401 + 296 = 1610, \text{ and } 1610 = [35 \times 46] \quad 4122 - [16 \times 10] = 3962$$

$$[16 \times 10] = [8 \times 20], \text{ and } 3962 - 820 = 3142 \quad \text{Note also that } 4122 - 3142 = 2598 - 1618.$$

Set out the 400 gematric values of Genesis 1. 1's seven words without spaces as a line of twenty digits, thus: 91320386401395407296. Multiply each digit by the number of its place in the line, and then add up the twenty products.

$$\begin{aligned}
 &[9 \times 1] + [1 \times 2] + [3 \times 3] + [2 \times 4] + [0 \times 5] + [3 \times 6] + [8 \times 7] + [6 \times 8] \\
 &+ [4 \times 9] + [0 \times 10] + [1 \times 11] + [3 \times 12] + [9 \times 13] + [5 \times 14] + [4 \times 15] \\
 &+ [0 \times 16] + [7 \times 17] + [2 \times 18] + [9 \times 19] + [6 \times 20] = 926
 \end{aligned}$$

2701 (the total 400 gematric value of Genesis 1. 1) + 926 = 3627, which is the total 800 gematric value of John 1. 1. What may we learn from the numbers 2701, 926, and 3627? That God ordains the spatial and temporal POSITIONS of all created things in accordance with his own eternal nature (see Acts 17. 26, Romans 1. 20).

Two musical numbers, 864 and 432, are concealed in the Bible's opening words. The first word of Genesis 1. 1 has a 400 gematric value of 913 and a 406 gematric value of 1819, while the second word of Genesis 1. 1 has a 400 gematric value of 203 and a 406 gematric value of 1033.

$$913 + 1819 = 2732, \text{ and } 27 \times 32 = \underline{864} \quad 203 + 1033 = 1236, \text{ and } 12 \times 36 = \underline{432}$$

In 800 Greek gematria the 'Word' of John 1. 1 (λογος) has a value of 373, while in 400 Hebrew gematria 'Abraham' (אַבְרָהָם) has a value of 248. The product of 864 and 432 is 373248. (So is the product of 729 and 512.) When we look at the number 373248, we are reminded of John 8. 58: BEFORE ABRAHAM WAS, I AM. Note that 373248 = 72³, and that 723 = 241 x 3. Then read the digits 2 4 1 3 backward.

Let me point out reverently that 864, the fundamental number of music, has a gematric link with the name of the Lord Jesus Christ (κυριος Ιησους Χριστος in Greek). In 800 Greek gematria κυριος has a value of 800, Ιησους has a value of 888, and Χριστος has a value of 1480. The digital roots of 800, 888, and 1480 are respectively EIGHT, SIX, and FOUR.

$$8 + 0 + 0 = \mathbf{8} \quad 8 + 8 + 8 = 24, \text{ and } 2 + 4 = \mathbf{6} \quad 1 + 4 + 8 + 0 = 13, \text{ and } 1 + 3 = \mathbf{4}$$

Notice that the Greek words κυριος, Ιησους, and Χριστος contain respectively SIX, SIX, and SEVEN letters. The number 667 can tell an interesting tale.

$$[6 \times 67] + [66 \times 7] = 864$$

THE CIRCLE, THE ROOT OF TWO, THE CALENDAR, AND MUSIC

[Forget about decimal points in what follows.]

בראשית ברא אלהים את השמים ואת הארץ

The Hebrew text of Genesis 1. 1 contains twenty-eight letters whose 400 gematric values are respectively 2, 200, 1, 300, 10, 400; 2, 200, 1; 1, 30, 5, 10, 40; 1, 400; 5, 300, 40, 10, 40; 6, 1, 400; 5, 1, 200, 90. These twenty-eight gematric values have digital roots respectively as follows.

2 2 1 3 1 4 2 2 1 1 3 5 1 4 1 4 5 3 4 1 4 6 1 4 5 1 2 9

The middle four digital roots give us the square root of two.

2 2 1 3 1 4 2 2 1 1 3 5 1 4 1 4 5 3 4 1 4 6 1 4 5 1 2 9

On either side of the central four-digit group we find a twelve-digit group which divides itself naturally into sets of THREE, FOUR, and FIVE digits.

2 2 1 3 1 4 2 2 1 1 3 5 1 4 1 4 5 3 4 1 4 6 1 4 5 1 2 9

What's the big deal about three, four, and five? Well, the book of Genesis was written by Moses, whose name in Hebrew (mem-shin-he) has a 400 gematric value of 345.

Each 3-4-5 set of digits contains a FOUR-digit group that we should be able to recognize as an old friend.

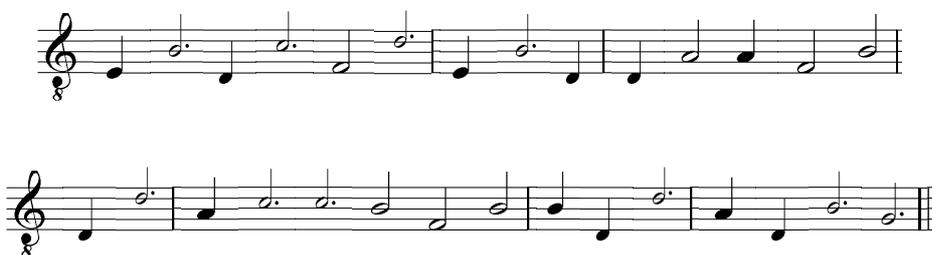
2 2 1 3 1 4 2 2 1 1 3 5 1 4 1 4 5 3 4 1 4 6 1 4 5 1 2 9

3142 is the four-digit value of π , and 1461 is the number of days in a leap-year quadrennium ($365 + 365 + 365 + 366 = 1461$).

The sum of 3142, 1414, and 1461 is 6017, which happens to be what mathematicians call the centred octahedral number of seventeen.

Now we'll transcribe the seven Hebrew words of Genesis 1. 1 into Davidic musical notation. Note that word 5's second character (shin) stands for a double letter. The seven transcribed words turn out to have *numbers of beats* as follows.

13 5 8 4 13 5 8

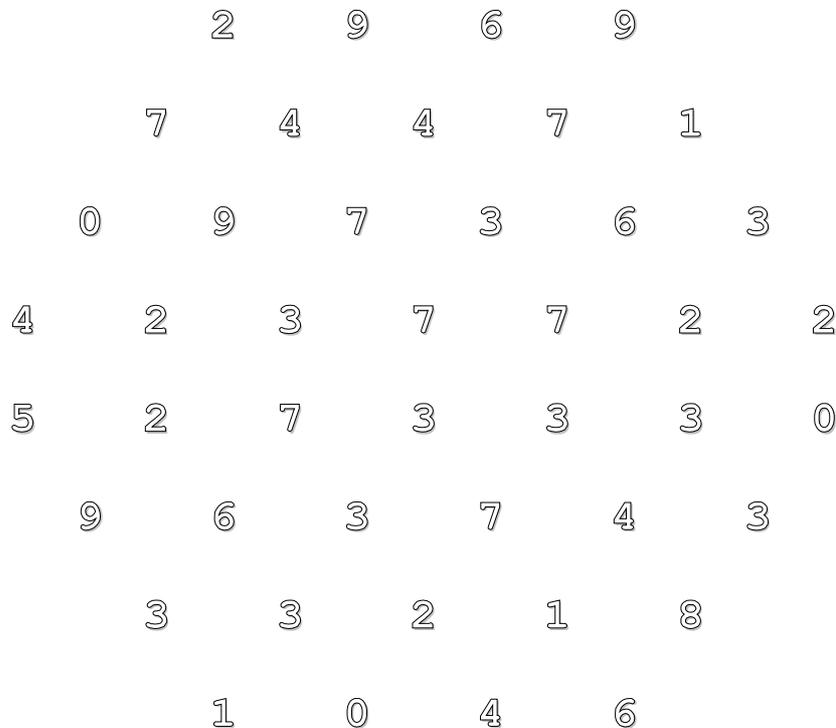


(Doesn't look like a set of seven random numbers!) We can detect elements of patternation in the melody, of which Berlioz might have approved. While the musical cell that involves *a one-beat note leaping up to a three-beat note* appears seven times, the order of the melodic intervals has an architecture of its own. In the line of numbers which you see below, 5 denotes the interval of a fifth, 6 denotes the interval of a sixth, and so on. How many 563s can you find?

[56-7-56-7-56] 1 5 1 3 4 [6-8-4] 3 1 2 4 4 1 [6-8-4] 5 6 3

THE DRIVING-WHEEL OF THE UNIVERSE

Now we'll return to familiar forms of gematria. Genesis 1. 1 contains seven Hebrew words. The twenty digits of their 400 gematric values (913, 203, 86, 401, 395, 407, and 296) may be arranged so as to form the rim of an octagonal clock-face. Read the twenty digits clockwise, starting from the top right corner.



You can examine the contained numbers in your own time. Standing in the centre is seventy-three (= wisdom: cheth-kaph-mem-he in 400 gematria). The first three Hebrew words of Habakkuk 3. 6 (עמד וימדד ארץ = He stood, and measured the earth) add up to 469 in 400 gematria, and 469 by interpretation = [4 + 69] = 73. **Around the 73 run four thirty-sevens (= the fourth power of *i*: he-beth-lamedh = 37 in 400 gematria).** After looking up Ecclesiastes 1. 2, read the eight digits clockwise, starting from the top right corner, and remember that positive unity is the fourth power of *i*. Around the four thirty-sevens run the fourteen digits of Genesis 1. 1's 22 gematric values (76, 23, 41, 23, 62, 29, and 44). Read the fourteen digits clockwise, starting from the top right corner.

After looking up Proverbs 3. 19a go to the central 73, which is surrounded by rings adding up respectively to 148, 298, and 2701. Work your way outwards arithmetically. To move from 73 to 148, multiply by two and add two.

$$[73 \times 2] + 2 = 37 + 37 + 37 + 37$$

To move from 148 to 298, multiply by two and add two.

$$[(37 + 37 + 37 + 37) \times 2] + 2 = 76 + 23 + 41 + 23 + 62 + 29 + 44$$

To move from 298 to 2701, employ the three digits of 298 as follows.

$$[29 + 8] \times [82 - 9] = 913 + 203 + 86 + 401 + 395 + 407 + 296$$

You remember the number 926 from page 699. Notice that $2701 - [92 \times 6] = 2149$, and that $2 \times 149 = 298$. We'll find another numerical 'implication' on page 702.

BEHOLD ONE WHEEL UPON THE EARTH

*'Zekiel saw de wheel of time.
Wheel in de middle of a wheel.....*

| | | | | | | |
|---|---|---|---|---|---|---|
| | 2 | 9 | 6 | 9 | | |
| | 7 | 4 | 4 | 7 | 1 | |
| | 0 | 9 | 7 | 3 | 6 | 3 |
| 4 | 2 | 3 | 7 | 7 | 2 | 2 |
| 5 | 2 | 7 | 3 | 3 | 3 | 0 |
| | 9 | 6 | 3 | 7 | 4 | 3 |
| | 3 | 3 | 2 | 1 | 8 | |
| | 1 | 0 | 4 | 6 | | |

Study the fourteen digits of Genesis 1. 1's 22 gematric values (76, 23, 41, 23, 62, 29, and 44: sum = 298), which encode four fundamental facts:

- [two digits] **the octave ratio 1 : 2,**
- [three digits] **the unitary string-length 432 (= the note *d'*),**
- [four digits] **the number [67 x 4 x 4] = 1072 (the reversal of 2701), and**
- [five digits] **the holy mountain [3 x 6 x 229] = 4122.**

Now study the twenty digits of the 400 gematric values (913, 203, 86, 401, 395, 407, and 296: sum = 2701) which run around the rim of the clock-face. An 864 in the bottom right corner looks across at a 729 in the top left corner. 864 is the unitary string-length of the note *d*, and 729 is the unitary string-length of the note *f*. What do we learn from these two numbers? That the driving-wheel of the universe sounds a concordant minor third. Don't be surprised! The LORD intends heaven and earth to harmonize with each other. In 400 Hebrew gematria,

Psalm 148. 3's phrase שמש וירח (= sun and moon) adds up to 864, while

Psalm 90. 2's phrase ארץ ותבל (= the earth and the world) adds up to 729.

Of course the driving-wheel has a temporal aspect. One year contains 365.242199 days. The difference between Genesis 1. 1's 400 gematric total 2701 and its 22 gematric total 298 is 2403, which encrypts 'de wheel of time' as follows.

$$2403 = \text{by interpretation } [2 \times 403] = [365 + 242 + 199]$$

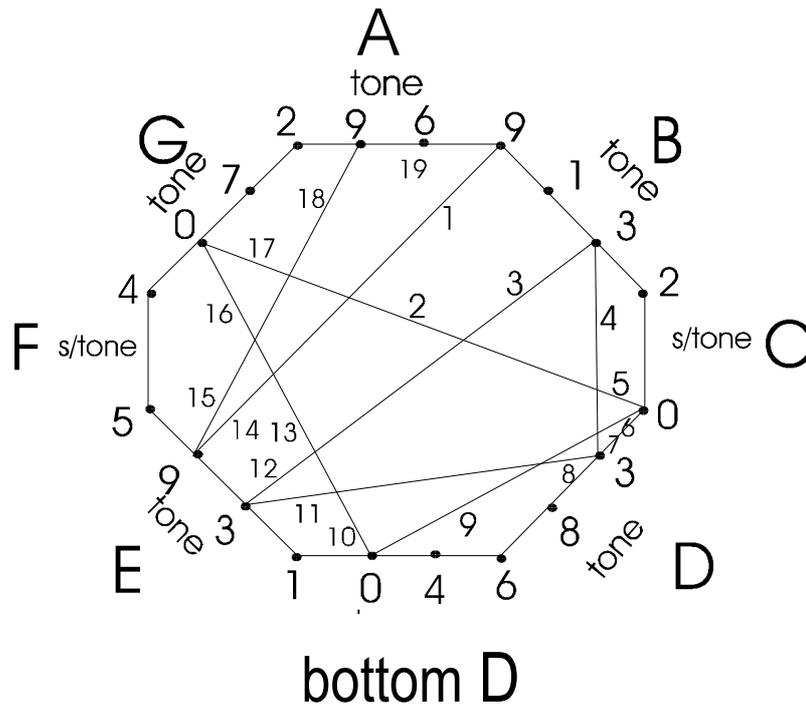
Delia derives the number of seconds in a year (31556926) from the four-digit number 1164, as follows: [11 + 64] raised to the power of FOUR (number of digits in 1164) minus [1087 x 77] = 31556926. The sum of 1087 and 77 is 1164.

$$[11 + 64]^4 - [1087 \times 77] = 31556926$$

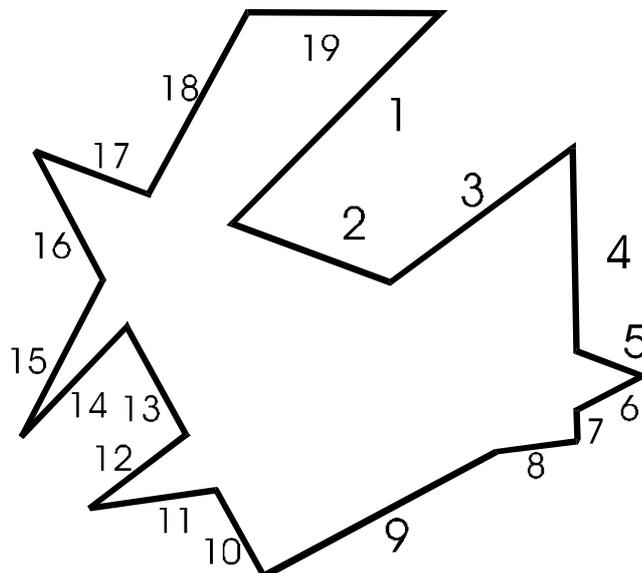
Rosie wants me to point out that in 800 Greek gematria the value of *Ταρταρος* (= Tartarus) is 1072. Finally, Delia wants me to record a strange equation. 1164 = by interpretation [116 x 4] = Davidic 464 = [3 + 3 + 458], and [3 x 3 x 458] = 4122. From 1164 via David to the holy mountain!

THE INTERSECTING TRIANGLES OF ZERO, THREE, AND NINE

You'll have noticed already that the octagon has six long sides and two short sides. The bottom side represents bottom D, first note of the 864-432 scale. Imagine that scale as running clockwise around the octagon. Apart from the bottom side, each long side stands for a note which is separated by a whole tone from its predecessor, and each short side stands for a note which is separated by a semitone from its predecessor. (For the two diagrams that appear on this page I'm indebted to my friend Mr Pete Dello, and not at all to Dr John Dee.)



Running around the perimeter of the octagon are the twenty digits of Genesis 1. 1's 400 gematric values. These digits include a trio of zeroes, a trio of threes, and a trio of nines. When the three trios are converted into three triangles, their nine sides combine to form a nineteen-sided figure.



HARMONIC WORK, BOHEMIAN WING, AND HOSAH WESTWARD

The 9-9-9 triangle's vertices are found in word 1 digit 1, word 5 digit 2, and word 7 digit 2. Express that three-cornered fact in the number $[11 + 52 + 72] = 135$, and set a nine beside the five to denote the three-vertices digit, thus: 1359.

The 3-3-3 triangle's vertices are found in word 1 digit 3, word 2 digit 3, and word 5 digit 1. Express that three-cornered fact in the number $[13 + 23 + 51] = 87$, and set a three beside the seven to denote the three-vertices digit, thus: 873.

The 0-0-0 triangle's vertices are found in word 2 digit 2, word 4 digit 2, and word 6 digit 2. Express that three-cornered fact in the number $[22 + 42 + 62] = 126$, and set a zero beside the six to denote the three-vertices digit, thus: 1260.

When you add up 1359, 873, and 1260, you get a number which you should construe as representing 'the triangles of 1164'.

$$1359 + 873 + 1260 = 3492 = [1164 \times 3]$$

In 400 Hebrew gematria 296 is the value of he-aleph-resh-tzaddi (= the earth), while 645 is the value of he-shin-mem-shin (= the sun), and 223 is the value of he-yodh-resh-cheth (= the moon). Earth, sun, and moon work in three-part harmony.

$$[\text{הָאָרֶץ} + \text{הַשֶּׁמֶשׁ} + \text{הַיָּרֵחַ}] = [296 + 645 + 223] = 1164$$

The nineteen-sided figure of page 703 represents the many conjoint trinities of the created universe. These trinities are exemplified by the trinity of earth, sun, and moon. Any one of them can be seen as resembling a group of three conjoint harpsichords whose players sit behind sides 9, 4, and 19. Some day I'll get round to making a nineteen-sided psaltery with one set of plucked strings and two underlying sets of sympathy strings. Years ago I made a medieval psaltery.....



.....called the 'Bohemian wing' (above, right), whose different sets of strings ran in different directions – eastward and northward, so to speak. Prompted by those directional words, we shall now walk in the footsteps of Isaac Newton by studying I Chronicles 26. 13-19. I'll depart from the AV rendering in verses 17 and 18.

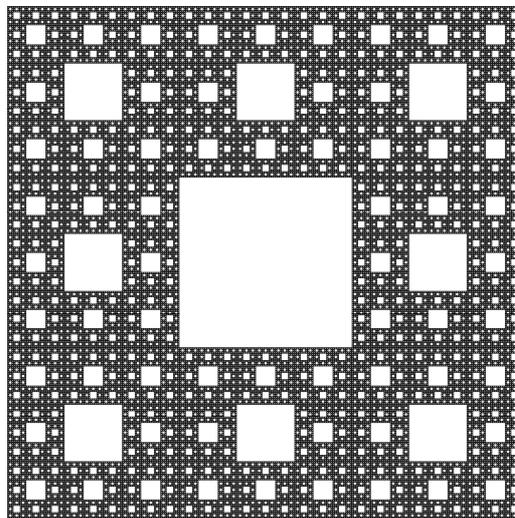
13 And they cast lots, as well the small as the great, according to the house of their fathers, for every gate. 14 And the lot **eastward** fell to Shelemiah. Then for Zechariah his son, a wise counsellor, they cast lots; and his lot came out **northward**. 15 To Obedom **southward**; and to his sons **the house of Asuppim**. 16 To Shuppim and Hosah the lot came forth **westward**, with **the gate Shallecheth**, by **the causeway of the going up**, ward against ward. 17 Eastward were six Levites, northward four a day, southward four a day, and toward Asuppim two. [No conjunction in the Hebrew.] Two..... 18at **Parbar westward**, four at **the causeway**, and two at **Parbar**. 19 These are the divisions of the porters among the sons of Kore, and among the sons of Merari.

HOW ARCHITECTURE EMERGES WHEN DICE ARE THROWN

You can create what is called a 'Sierpiński carpet' by playing what is called 'the chaos game' with a four-sided tetrahedral die, as follows.

- Step 1. Draw a square.
- Step 2. Label its vertices 1, 2, 3, and 4.
- Step 3. Randomly select any point inside the square.
- Step 4. Regard that point as your current position.
- Step 5. Randomly choose any one of the four vertices by throwing the die.
- Step 6. Move one-third of the distance from your current position to that vertex.
- Step 7. Neatly mark your third-of-the-way point with a pencil.
- Step 8. Go back to step 4 and keep going.

After marking a sufficient multitude of points, you will discern a two-dimensional structure which contains one very large white square, eight large white squares, sixty-four small white squares, and more besides.



When I read I Chronicles 26. 13-19, I wonder if the Levites were allowed to discover part of God's blueprint for the temple by playing a rectangularized form of the chaos game. I see the 'gates' as representing particular centres of governance, and I locate them in terms of a timeless temple clock-face, as follows. Shelemiah is allotted the eastern gate at three o'clock. Zechariah is allotted the northern gate at twelve o'clock. Obed-edom is allotted the southern gate at six o'clock. Obed-edom's sons are allotted the western gate, 'the House of Assupim', at nine o'clock. Shuppim and Hosah are allotted 'the causeway of the going up' at one-thirty, TOGETHER WITH (עם) 'the gate Shallecheth' which is found in the adjacent corner *on the western side* at ten-thirty. 'Parbar westward' is found at seven-thirty, and 'the causeway' is found in the adjacent corner *on the eastern side* at four-thirty. 'Parbar' is found in the centre of the clock-face. It is represented by the very large central square of the Sierpiński carpet. The eight large white squares which surround Parbar represent the other eight gates.

In an evil age 'Parbar westward' and 'Parbar' were corrupted into the single-word 'Parwarim' (פרורים: see II Kings 23. 11). Reading the word פרורים as *bull* (פר) and (ו) *buffalo* (רים), I reckon that the two Parbars came to be used for taurological ceremonies. The wau-for-beth third letter of פרורים cannot be explained out of existence by members of the *Don't-really-think-it's-important* school. I mean to say, B is not the same as W. There are pieces of confectionery called Star Bars, and there is a film called Star Wars, but Star Bars are not the same as Star Wars.

PARBAR IS A HEAVENLY PAVEMENT OF SAPPHIRE

Read backwards letters 86, 87, 88, and 89 from the end of the book of Habakkuk. These four letters spell the word פּרְבַר (= Parbar), and the piece of text in which they appear mentions a *stable devoid of animals*. Habakkuk's subtext may involve exactly such an 'animals-out' cleansing of the temple as we find in II Kings 23. 11. Note that the numbers 86, 87, 88, and 89 add up to 350, which is the 400 gematric value of סַפִּיר (= sapphire).

Resolute and reverent readers can address the following questions in their own time. Is Parbar encrypted in letters 363, 359, 346, and 342 of Psalm 22? Does the actual text (verses 13-14: verses 12-13 in the AV) speak of something like Parwarim? Note that the numbers 363, 359, 346, and 342 add up to 1410, which is the 400 gematric value both of II Samuel 24. 18 and of Job 28. 6. Does either of these verses relate to Parbar?

'Leave those questions for the moment,' says Lettuce Girl, 'and go back to the 350 in Habakkuk. Does Parbar itself have any connection with *sapphire*?'

Yes, it does. Let me read from Exodus 24. 10 in the New English Bible: '.....they saw the God of Israel. Under his feet there was, as it were, a pavement of sapphire, clear blue as the very heavens.....'. The Hebrew word here rendered 'pavement' (לבנת) has a 400 gematric value of 482, and so does the word פּרְבַר (= Parbar). So does the word נְכָבוֹדֹת in Psalm 87. 3 (= Glorious things), which is separated by only three words from verse 2's phrase שַׁעְרֵי צִיּוֹן (= the gates of Zion). Where God walks, the pavement is. Thus in verses 7 and 8 of Isaiah 52 Parbar connotes both ambulant beauty and musical harmony. Letters 374, 356, 338, and 320 of Isaiah 52 are respectively pe, resh, beth, and resh. The sum of 374, 356, 338, and 320 is 1388. You may be interested to note that $1388 = [52 \times 7] + [52 + 8] + 608$, the 400 gematric value of בֵּית הָאֲסַפִּים (= the house of Asuppim).

Parbar is found in letters 335, 341, 349, and 355 of Psalm 60. 335, 341, 349, and 355 add up to 1380, which is the sum of the 400 gematric values of שַׁעַר שַׁלְחֶת (= the gate Shallecheth) and לְנֹגְבָה (southward). We find Parbar twice in Psalm 68. First see letters 202, 196, 188, and 182 from the end. The sum of 202, 196, 188, and 182 is 768. These four Parbar-letters are placed so as to encode another gate, for 768 interpreted as 76×8 gives the 400 gematric value of בֵּית הָאֲסַפִּים (= the house of Asuppim). Now see letters 297, 300, 305, and 308 from the end of Psalm 68. 297, 300, 305, and 308 add up to 1210, which is the sum of the 400 gematric values of מִזְרָחָה (= eastward), בֵּית הָאֲסַפִּים (= the house of Asuppim), and לְמַעַרְב (= westward).

In Psalm 24 (see letters 207, 192, 183, and 168), David's placement of the Parbar-letters encodes שַׁלְחֶת (= Shallecheth), whose 400 gematric value (750) is equal to the sum of 207, 192, 183, and 168. The context includes *gates* and *doors*.

Let's move on. In 22 gematria צִיּוֹן (= Zion) adds up to forty-eight, four twelves make forty-eight, and Psalm 48 is the Zion-psalm *par excellence*. You'll find the *four* letters of Parbar if you start reading backward on the *forty-eighth* letter from the end of Psalm 48, which is pe, and leave *twelve*-letter gaps. Letters 48, 61, 74, and 87 from the end are respectively letters 407, 394, 381, and 368 from the start. $[407 + 394 + 381 + 368] + [48 + 61 + 74 + 87] = 1820$, which is the sum of the 400 gematric values of פּרְבַר (= Parbar), לְפָרְבַר לְמַעַרְב (= at Parbar westward), בְּמַסְלַה הָעוֹלָה (= the causeway of the going up), and צְפוֹנָה (= northward). Now take a look at verse 14 of the psalm (= AV, verse 13). The Hebrew letters which spell *Shallecheth* appear in the phrase שִׁיתוּ לְבַבְכֶם לְחִילָה (= Mark ye well her bulwarks), and the Hebrew letters which spell *Asuppim* appear in the phrase פַּסְגוּ אַרְמְנוֹתֶיהָ (= consider her palaces). For their part the first and last letters of the Parbar-cryptogram appear in the sapphiric samekh-pe-resh words סַפִּיר and תַּסְפִּיר.

PARBAR IS IN THE BIBLE, SO IT NEEDS TO BE STUDIED

Yesterday I heard a man recite I Chronicles 26. 18 as a kind of party piece. Today I came across a reference to 'Biblical trivia'. Let us be careful when we speak of holy things. There are no trivia in the Scriptures, and no one should speak lightly about the sacred pavement of heaven. The Parbar-cryptograms of Psalms 24 and 48 appear in pieces of text which talk about temple gates and temple architecture. Look now at Psalm 100. Letters 46, 51, 100, and 105 of the psalm may be spoken of respectively as word 12 letter 2, word 13 letter 2, word 26 letter 1, and word 27 letter 3. The four numbers 46, 51, 100, and 105 add up to 302, while the four word-letter numbers 122, 132, 261, and 273 add up to 788. In the sum of 302 and 788, which is 1090, we can discern the 400 gematric values of פרבר (= Parbar: 482) and בית האספנים (= the house of Asuppim: 608). Psalm 100's Parbar-cryptogram appears in a context which involves singing and gates.

Is Parbar a musical entity, then? Yes, it is. In Psalm 150, the word pe-resh-beth-resh is spelled out by letters 96, 87, 81, and 72, which happen to be respectively letters 72, 81, 87, and 96 from the end of the psalm. They also happen to be respectively the final letter of the Hebrew word for *timbrel*, the final letter of the Hebrew word for *harp*, the second letter of the Hebrew word for *psaltery*, and the final letter of the Hebrew word for *trumpet*! Furthermore, the Hebrew word which the AV renders 'with the timbrel' (בתף) has a 400 gematric value of 482, like פרבר (= Parbar). That musical word is flanked by a total of $2 \times 2 \times 41$ letters, and $482 = 2 \times 241$. What may we learn by reversing and conjoining the place-numbers of the letters? When I look at the number 2718, I see e. When I look at the number 7869, I see 1495 (total value of the 400 gematric alphabet), plus 3773 (a picture of the operator *i* multiplied by the operator *Wisdom*), plus 2601 (sum of the unitary string-lengths 864, 729, 576, and 432 which correspond respectively to the notes *d*, *f*, *a*, and *d'*). That's enough about what I see. Study the numbers on your own.

Parbar is an instrument of the God who calculates, creates, governs, harmonizes, and travels. The word פרבר can be taken to mean 'the fountain of fortuity', or 'the well-spring of chance', or 'the dice-cup', or even 'the lot-pot'. (Read Proverbs 16. 33, 18. 18.) Remember the aleatory context in which we find the only explicit mention of Parbar. Remember also how the random numbers of the chaos game combine to build a complex coherent structure. Bounded randomness creates the structure. It is a fact that a Sierpiński carpet may be generated by the chaos game. Any such fact helps us to believe that God will make harmony from the multitudinous acts of creatures to whom he gives the faculty of genuine choice,

The Great Pavement of Westminster Abbey, which affects to comprehend time, is made up of immobile stones. The bearings of my Russian pocket-watch are immobile jewels. By contrast, the heavenly Parbar, whose pulsing sapphires comprehend both time and chance, is far more alive than a rock-pool. Don't think of Parbar as a fair-weather thing, like the sight of a distant coastline on a clear day. The distant coastline is always there. Of course on a bad day the person who walks with God may be unable to discern anything like a pavement of sapphire underfoot. It's hard to see Parbar in verse 9 of Psalm 10 (AV).....

He lieth in wait secretly as a lion in his den: he lieth in wait to catch the poor: he doth catch the poor, when he draweth him into his net.

.....until you look at the verse in Hebrew. Read backward, starting on the twenty-first letter from the end, and leave five-letter gaps.

יארב במסתר כאריה בסכה יארב לחטוף עני יחטף עני במשכו ברשתו

PARBAR: WISDOM, GLORY, AND THE GEARBOX

Even while the wicked man of Psalm 10 is drawing a poor man into his net, the jewelled loom-engine of Parbar is contrapuntally weaving the disparate fibres of events into a living and unified lattice. Psalm 10's Parbar-cryptogram involves letters 301, 295, 289, and 283 of the Hebrew text. I see the number 1168 (sum of 301, 295, 289, and 283) as representing a battle between 3773 (= the operator *i* concatenated with the operator *Wisdom*) and 2605 (= the leviathan of anti-matter).

Wisdom likes to operate in CIRCLES. She makes a bowl by compelling the clay to run in circles between her hands. She grinds her flour by compelling an upper millstone to run in circles over the grain. She blends the ingredients of her bread by drawing circles in the bowl with a spoon. She *spins* thread, sometimes on a wheel (note the word חכמת = *wise* in Exodus 35. 25). She enables a standing bamboo cane to run first by bending it into a circle, and then by rolling it. She travels in a wheeled chariot. She makes a flute by compelling the wood to run in circles first around the body of her drill-bit, and then against the edge of her chisel-blade. She tunes a viol-string by turning a peg in a circular hole. She smiles when a rotating planet allows all of its dwellers to enjoy the sunlight. And she allows an anticlockwise rotation through ninety degrees to represent *i*.

In 400 gematria חוג (= circle) adds up to 17, חכמה (= Wisdom) adds up to 73, and הבל (= *i*) adds up to 37. Let the number 1773 denote Wisdom acting in a rotative rôle, like a ballerina performing *fouettés*, and see if you can make sense of the equation $1773 + 37^2 = 3142$. Note that $73 = 31 + 42$.

Go on to look at the 80-letter unit which is constituted by Genesis 1. 1-2, and forget about human authorial agency. You will find Parbar if you read backward letters 74, 59, 42, and 27 of the 80-letter unit. Here is something that you need to know about Parbar. In 400, 22, 406, and 28 gematria פרבר has values respectively of 482, 59, 1513, and 154. The sum of those four values is 2208, which happens to be the total 400 gematric value of I Chronicles 26. 19. (The Chronicler is telling us first that Parbar is of great consequence, and secondly that the pan-scientific table of I Chronicles 26. 13-19 must be read in terms of all four gematric alphabets.) After studying the Parbar-cryptogram of Genesis 1. 1-2, consider the three equations which are set out below.

$$[74 \times 59] - [42 \times 27] = 3232, \text{ and } 7459 - 4227 = 3232, \text{ and } 2208 = 3232 - [32 \times 32]$$

If you remember that the Hebrew word for 'glory' (כבוד) has a 400 gematric value of 32, you'll see what is going on here. Parbar is where God's glory goes to work.

The gear-building numbers of page 694 can be related mnemonically to the temple clock-face of page 705. Here are the first five gear-building numbers.

1000 (denoting TIME) is found at one-thirty, for במסלה העולה (= by the causeway of the going up) has a 400 gematric value of 253, and $1000 = [2 \times 5]^3$.

19491 (denoting HARMONY) is found at three o'clock, for למזרח (= eastward) has a 400 gematric value of 285, and $194 + 91 = 285$.

6336 (denoting THE HOLY MOUNTAIN) is found at four-thirty, for למסלה (= at the causeway) has 400, 22, and 406 gematric values respectively of 165, 57, and 364; $165 + 57 = 222$, and $2 \times 22 \times 36 \times 4 = 6336$.

3962 (denoting CHEMISTRY) is found at six o'clock, for לנגבה (= southward) has 400, 22, and 406 gematric values respectively of 90, 36, and 681, whose sum is 269×3 .

6371 (denoting UNTEMPERED MUSICAL NOTES) is found at seven-thirty, for למערב (= westward) and לפרבר (= At Parbar) have 22 gematric values respectively of 63 and 71.

PARBAR: THE GEARBOX, AND TWELVE ENCRYPTIONS

The remaining three gear-building numbers are as follows.

16661 (denoting MATHEMATICS) is found at nine o'clock, for (= and toward Asuppim) has a 400 gematric value of 227, and $166 + 61 = 227$.

8405 (denoting LANGUAGE) is found at ten-thirty, for (= the gate Shallecheth) has a 22 gematric value of $123 = 41 \times 3$, and $413 = 8 + 405$.

10811 (denoting TEMPERED MUSICAL NOTES) is found at twelve o'clock, for (= northward) has 400 and 22 gematric values respectively of 261 and 72, and $[(2 \times 6 \times 1) \times 7^2] = 19 + 569$, and $19 \times 569 = 10811$.

Ninth and lastly, 73037 (the SUM of the eight gear-building numbers) is found in the centre of the clock-face, for (= Parbar) has 406 and 28 gematric values respectively of 1513 and 154, and $1513 - 154 = 1359$, and $13 \times 59 = 730 + 37$.

Let me spell out below the twelve examples of Parbar which we have considered.

Habakkuk 3. 17 (consecutive letters)

ואין בקר ברפתים

Psalms 22. 13-14 (letter-spacing 3-12-3)

סבבוני פרים רבים אבירי בשן כתר וני פצו

Isaiah 52. 7-8 (letter-spacing 17-17-17)

ר גלי מבשר משמיע שלום מבר טוב משמיע ישועה אמר לציון מלך אלהיך קול צפיד

Psalms 60. 10-11 (letter-spacing 5-7-5)

עלי פלשת התרועעי מי יבלני עיר מצור

Psalms 68. 28 and 31 (letter-spacing 2-4-2 in verse 28, and 5-7-5 in verse 31)

שרי זבלון שרי נפתלי ברצי כסף בזר עמים קרבות יהפצו

Psalms 24. 6-7 (letter-spacing 14-8-14)

זה דור דרשו מבקשי פניך יעקב סלה שאו שערים ראשיכם והנשאו פתחי

Psalms 48. 13-14 (letter-spacing 12-12-12)

ספרו מגדליה שיתו לבכם לחילה פסגו ארמנותיה למען תספרו

Psalms 100. 2-4 (letter-spacing 4-48-4)

לפניו ברננה דעו כי יהוה הוא אלהים הוא עשנו ולא אנחנו עמו וצאן מרעיתו באו שעריו

Psalms 150 (letter-spacing 8-5-8)

הללוהו בתקע שופר הללוהו בגבל וכנור הללוהו בתוף

Psalms 10. 9 (letter-spacing 5-5-5)

יארב במסתר כאריה בסכה יארב לחטוף עני יחטף עני במשכו ברשתו

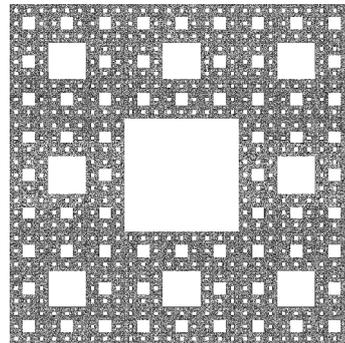
Genesis 1. 1-2 (letter-spacing 14-16-14)

הארץ והארץ היתה תהו ובהו וחשך על פני תהום ורוח אלהים מרחפת על פני

See how many more of the temple gates you can find by looking through the Hebrew Bible on your own. But hark! Greta wants to ask me something.

‘HOW DO WE KNOW THAT PARBAR IS IN THE CENTRE?’

That’s a fair question. Look at the very large white square which occupies the centre of a Sierpiński carpet. Are we right to equate Parbar with that square?



Let me adduce Psalm 150 in reply. I’ll print an unspaced version of the Hebrew psalm-text in seven lines containing respectively 25, 23, 23, 25, 23, 23, and 25 characters. Then I’ll underline the four letters of the Parbar-cryptogram (pe, resh, beth, resh: read backward from left to right). These four letters appear in a line which constitutes the exact 25-letter centre of a 167-letter psalm.

הללו יההלו אלבקדשוהלהלוהו בר
 קיעעזוהלהלוהו בגבורתי והלהל
 והוכרבגדלוהלהלוהו בתקעשופ
 רהלהלוהו בנבלוכנו רהלהלוהו בתפ
 ומחולהלהלוהו במניסועגבהלל
 והובצלצלשמעהלהלוהובצלצל
 יתרועהכלהנשמהלהלהלוהויה

Note that the first of the Parbar-letters (pe) is the last letter of the word בתף (= with the timbrel), which has a 400 gematric value of 482, like פרבר (= Parbar). Note also that the last of the Parbar-letters (resh) is the last letter of the word שופר (= trumpet), which has a 400 gematric value of 586, like ירושלם (= Jerusalem). 586 happens to be the 400 gematric value of the following three-word sentence.

פרבר בלב ההיכל (= Parbar [is] in the centre of the temple).

In 22 gematria, the sentence constitutes a 59 = 59 equation. In [400 + 22 + 406 + 28] gematria, the three-word sentence adds up to [2208 + 1045 + 408] = 3661, while the single word ירושלם (= Jerusalem) has a value of 1927. The digits of 3661 and 1927 may be arranged so as to generate an interesting equation.

$$[36 \times 6 \times 1] = 482 - [19 \times 2 \times 7]$$

Earthly Parbar is in the centre of the temple. The temple is in the middle of Jerusalem. Jerusalem is the *axis mundi*. Our sapphiric planet is the centre of the universe. Heavenly Parbar is the hub of a physical-and-spiritual universe in which an operator called Wisdom administers the business of *circular motion*. (A rifle bullet and a well-passed rugby ball both SPIN as they travel. That’s wisdom.)

The word פרורים (*parwarim*) appears in II Kings 23. 11. What's the noise about? Oh, several scholars are complaining that my last six pages are 'excessively fanciful'. You really have to laugh. Not one of these scholars gave a whimper when פרורים was rendered 'suburbs'. I don't know how such an embarrassingly frightful piece of translation has managed to live for so long. If you ever find an edifice containing suburbs in the centre of a city, please send me a postcard.

Enough! We have come back to the gearbox. Our present universe is a harmonious high-tolerance engine whose gears were designed by Almighty God. (One reader, who imagines that the LORD is not interested in engines, needs to go and study the vehicle of Ezekiel 1. 4-28. A wiser reader is wondering if Psalm 60 encodes a sophisticated verbal version of the Antikythera Mechanism.) Somewhere in the engine-room of heaven there is a gearbox which is controlled by the Creator. That piece of divine engineering has as much to do with the gearbox of page 695 as a great steam-train like *Mallard* has to do with the red wheelbarrow of William Carlos Williams.

Nonetheless a red wheelbarrow may declare a certain amount of truth.

'Listen.' Miss Benn opens her case. 'I'm hearing music everywhere today.' She takes out two sheets of paper, and sets them on the table. (No one else knows yet, but Delia has said farewell to her theatrical career.) 'See if you agree with what I've written.'

TOUCH THE MOUNTAINS, AND THEY SHALL SMOKE

In both 400 and 22 gematria, God's *goodness* (teth-wau-beth) has the value 17, whose triangular number is 153. When the triangular 153 is made into a straight line it becomes the basis for the triangular numbers of 39, 51, and 63 (respectively 780, 1326, and 2016). These three triangular numbers compose the holy mountain. They add up to 4122, and articulate Euler's Identity. In the following equation the four terms which appear on the left side of the equal-sign represent respectively *e*, *i*, *pi*, and minus one.

$$[486 + (37 \times 113)] - 545 = 4122$$

4122 is the sum of the total 400 and 22 gematric values of Genesis 1. 2.

והארץ היתה תהו ובהו וחשך על פני תהום

ורוח אלהים מרחפת על פני המים

And the earth was TOHU, and BOHU; and darkness was upon the face of the deep. And the Spirit of God moved upon the face of the waters.

Total 400 gematric value = 3546 Total 22 gematric value = 576

3546 articulates the formula for mass-energy equivalence. In the following equation 23 represents mass, 60 represents the speed of light, and 77 represents total energy.

$$[23 + (60 \times 60)] - 77 = 3546$$

I'm not sure how to construe 576, which is the difference between 4122 and 3546. The following equation is helpful up to a point.

$$4122 - [4 \times 12^2] = 3546$$

UPON AN INSTRUMENT OF TEN STRINGS

576 is the square of 24.

576 = $[8^2 \times 3^2]$. The bracketed expression may be read backward and then interpreted as 2328, the sum of Psalm 49's two prime-totals 1164 and 1164.

576 is the 400 Hebrew gematric value of עשור (= TEN: ayin-sin-wau-resh). It is also the 800 Greek gematric value of πνευμα (= SPIRIT: pi-nu-epsilon-upsilon-mu-alpha).

I wonder if the ten untempered notes are relevant here. Their unitary lengths add up to 6371. When 6371 is subtracted from the sum of 4122 and 3546, 1297 remains. 1297 may be interpreted as $[12 \times 97] = 1164$. Furthermore, there are 31556926 seconds in a year, and $[315 + 56 + 926] = 1297$.

576 is the unitary string-length which produces the note *a* (fifth note of the 864-432 scale).

4122 in base 10 is 576 in base 28.

576 represents squaring, or an increase in the number of dimensions.

Genesis 1. 2 is made up of three sections. The third section (= *And the Spirit of God moved upon the face of the waters*) adds up in 400 gematria to 1369, the square of 37, viz the square of *i*, which is minus one. Between 1369 and 545, the normal denotation of minus one, there is a holy-mountain difference of $[412 \times 2]$.

576 as $[8^2 \times 3^2]$, read backward and interpreted as 2328, suggests that the balanced books of our present provisional universe are written in prime numbers.

576 refers obliquely to ten dimensions, and to ten musical notes. It also speaks of a universe in which the decimal system is supremely important.

576 denotes the creative work of the Holy Spirit.

576 is the unitary string-length which corresponds to the note *a*, and should therefore be seen as encoding a sung musical word.

576 articulates the holy mountain in a different notation.

'All happy so far?' Delia speaks in a controlled voice.

'I'm not,' says Lexis Picot. 'Even if you accept that the number 4122 represents the mountain of the LORD, it is altogether frivolous to conceive of *a musical note* having any relation to that mountain.'

'Do you think so?' asks Miss Benn. 'Look at Isaiah 30. 29.' After turning to the passage, she reaches her Bible to Lexis.

Ye shall have a song, as in the night when a holy solemnity is kept; and gladness of heart, as when one goeth with a pipe to come into the mountain of the LORD, to the mighty One of Israel.

'In Hebrew,' Delia continues, 'Isaiah 30. 29 has a 400 gematric total of 3634.' She pauses. 'When you add $[4 \times 122]$ to 3634, you get 4122.'

‘Oh, dear!’ Lexis Picot begins to laugh quietly. ‘What I said was wrong.’

‘Welcome aboard, Lexis. We need you.’ Miss Benn looks at me thoughtfully. ‘Now, dear. Let’s go back to what you said about behemoth and leviathan.’

‘The behemoth appears in Job 40.15, and that verse has a 400 gematric value of 2676. The leviathan appears in Job 40. 25, and *that* verse has a 400 gematric value of 2605. You’ve pretty well told us that 2676 relates to the elements, and that 2605 relates to the anti-elements.’ Delia pauses. ‘I’ve written an equation in which 2676 represents *matter*, and 2605 represents *antimatter*.

‘There are seven terms in the equation. 2676 and 2605 are respectively the first and second terms. The third term is 4122, representing Euler’s Identity, and the fifth term is 576, which may be subtracted from 4122 to leave 3546. The number 3546 represents the formula for mass-energy equivalence.

‘We’re nearly there.’ Miss Benn smiles. ‘The fourth term is the base-number 10, and the sixth term is the base-number 28. I thought it right to represent the remarkable fact that 4122 in base 10 is 576 in base 28.’ She pauses. ‘On the right of the equal-sign is the seventh term, 545, representing minus one.’

Pulsing with secret mirth, Delia sets a strip of paper on the table.

$$[2676 + 2605] - [(4122 + 10) + (576 + 28)] = 545$$

What is the message of that equation? Do Euler’s Identity and the formula for mass-energy equivalence operate simultaneously to produce some kind of negative unity when matter and antimatter combine?

‘Maybe at the end of the universe,’ replies Miss Benn.

In II Peter 3. 10 we read that *the heavens shall pass away with a great noise*.

‘Yes, dear.’ Delia speaks thoughtfully. ‘But I prefer to read the equation *backward*, in terms of the primordial creative act. Here’s what I mean. The Spirit of God moves upon the face of the “waters”, squaring *i*.’ She pauses. ‘When *i* is squared, two other things happen at the same moment so as to generate matter and anti-matter. In that moment, the real Big Bang happens.’

‘Does the bang have a sound?’ you ask.

‘Oh, yes!’ Miss Benn replies. ‘There may be a hint of it in Job 38. 7.’

‘Does the sound involve musical notes?’ asks Lettuce Girl.

‘Of course,’ answers Delia. ‘In 400 gematria, Job 38. 7 adds up to 648 plus 486.’

So the sound may be some ineffably opulent relation of the fanfare-fourth *g-c*’.

‘Indeed.’ Miss Benn looks into space. ‘I wonder if the formula itself is still resounding. Like a Tibetan singing bowl.’

Let me see if I’ve understood what you’re saying. Do you conceive of your formula as a great instrument?

‘Yes, dear, I do.’ Delia begins to fold up her sheet of paper. ‘That’s why I asked you about gears and organ-stops.’ She pauses. ‘I see the formula as applying comprehensively to our present provisional universe. Its twenty-two digits may even take account of *opposition*. Here’s what I mean.

‘Genesis 1. 2 is made up of three sections. The second section (= *and darkness was upon the face of the deep*) adds up in 400 gematria to 1025, which is the 800 Greek gematric value of εξακοσιοι εξηκοντα εξ (= *Six hundred threescore and six*). 1025 is also the 800 Greek value of the genitive plural noun δαιμονων (= *of devils*) in Revelation 18. 2.’ Miss Benn pauses for a moment.

Sit mihi fas audita loqui (= May it be lawful for me to tell what I have heard). There is no number which God does not own. Why does Satan want to steal the sum of the squares of the first seven primes? Because he wants to take the place of the Word who has always existed, who is a member of the Holy Trinity, and who himself is completely God. The three sections of John 1. 1 have 800 Greek gematric values of 1275 (= *In the beginning was the Word*), 1536 (= *and the Word was with God*), and 816 (= *and the Word was God*). Take time to extract the digital roots of these three numbers, and then work out the 400 Hebrew gematric value of the word סתר (= his secret place) from Psalm 18. 12. The 24 Greek gematric values of John 1. 1’s three sections are respectively 171, 271, and 163. 1275 is the triangular number of fifty, 1536 is three times the cube of eight, and 816 is the ‘tetrahedral’ number of sixteen. 171 is the triangular number of eighteen, while 271 is the centred hexagonal number of ten. Let me conclude. The digital roots of consecutive triangular numbers run in the recurring series 1 3 6 1 6 3 1 9 9, so 163 may be seen as concatenating the three central terms of that series.

‘Go back now to what you said on page 641,’ Delia continues. ‘When from 1025 you subtract 666 you get 359, the 400 Hebrew gematric value of the word *sineth-nun*, or *Satan*. The number 1025 indicates *Satanic opposition*.’ She holds out a tiny piece of card. ‘Look at what happens when the twenty-two digits of the formula are used to build the pentagonal number of four. The digits 1, 0, 2, and 5 form the right vertical side.’

| | | | | |
|---|---|---|----------|--|
| | | 2 | | |
| | | 6 | 7 | |
| | 6 | 2 | 6 | |
| 0 | 5 | 4 | 1 | |
| 2 | 2 | 1 | 0 | |
| 5 | 7 | 6 | 2 | |
| 8 | 5 | 4 | 5 | |

‘My friend Bessie Gosling is *obsessed* with pentagons,’ Delia continues. ‘Bessie would get very excited about that 1025. For myself, I can see no reason to freeze the formula’s digits in a particular polygon.’ Miss Benn drops her card in the trash-can. ‘All twenty-two digits add up to 86, which is the 400 Hebrew gematric value of aleph-lamedh-he-yodh-mem, or *God*. And there’s more. If you write the twenty-two digits out on one line, you’ll be able to see five examples of mirror-imaging. Start at either end, and read towards the middle.’ Delia pauses. ‘Blank-blank-blank-blank, TWO-SIX, blank, FIVE, blank, ONE-TWO.’

2 6 7 6 2 6 0 5 4 1 2 2 1 0 5 7 6 2 8 5 4 5

By reading the reflective numbers as 2 x [26 + 5 + 12], you can get another 86.

‘So you can,’ says Delia. ‘But if you read each set of reflective numbers from the centre outwards as [21 x 5 x 62], you get 6510, which is the sum of the eight scalar numbers and David’s twenty-two notation-numbers. Look.’ She points to a page of her notebook. ‘The universe is musical.’

| | | |
|--|---|-----|
| 864 + 001 + 008 + 060 | = | 933 |
| 768 + 002 + 009 + 070 | = | 849 |
| 729 + 003 + 010 + 080 | = | 822 |
| 648 + 004 + 020 + 090 | = | 762 |
| 576 + 005 + 030 + 100 | = | 711 |
| 512 + 006 + 040 + 200 | = | 758 |
| 486 + 007 + 050 + 300 | = | 843 |
| 432 + 400 | = | 832 |
| 933 + 849 + 822 + 762 + 711 + 758 + 843 + 832 = 6510 | | |

‘Don’t think I’m being rude,’ says Lettuce Boy. ‘Is it possible that your comprehensive formula is a piece of nonsense?’

‘Oh, yes!’ Delia laughs. ‘What I’ve shown you represents only a speculation. If you manage to establish that the equation *is* a piece of nonsense, you can tell me. Then I’ll know a bit more than I know now.’ She lifts the strip of paper which bears her formula, and regards it for a moment in silence.

| |
|--|
| $[2676 + 2605] - [(4122 + 10) + (576 + 28)] = 545$ |
|--|

At length Miss Benn speaks again. ‘All seven terms of the equation add up to 10562.’ She pauses. ‘105 multiplied by 62 gives you another musical 6510.’

It does indeed. And your seven-term equation may be compressed to give a three-digit mnemonic number. The first two terms add up to 5281. So do the five remaining terms. All seven terms of the equation therefore add up to 2 x 5281.

$$[(2 \times 5281) \text{ interpreted as } 25281] = 159^2, \text{ and } [159 \times 2] = 318$$

‘318 is the number of Abram’s trained servants in Genesis 14.’ Suddenly Delia rises to her feet. ‘Listen! Forget about equations for a minute.’ She pauses. ‘Some time ago, four of us played in a bowls marathon.’

‘Indeed.’ Rosie grimaces at the memory. ‘We were terrible.’

‘Oh, I know.’ Miss Benn smiles happily. ‘But we *learned* something.’ She walks over to the window. ‘What does every bowl possess?’

‘A bias,’ you reply.

‘Correct,’ says Delia. ‘And the universe has a bias in favour of *matter*.’ She pauses. ‘Between the matter-number 2676 and the antimatter-number 2605, there is a difference of 71. What is that 71? It is the seal of the Holy Spirit. In 400 Hebrew gematria, 71 is the value of yodh-wau-nun-he, which means DOVE.’

‘So the work that the Holy Spirit did in Genesis 1. 2 marked the universe with a permanent seal,’ says Lettuce Girl.

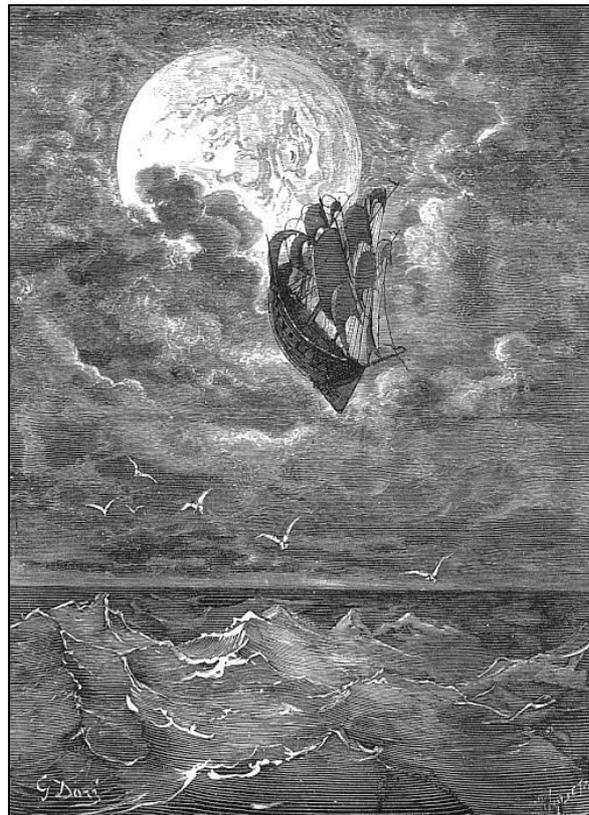
Jane has written five equations on a loose page. To what four numbers is she alluding?
Συνεκλεκτη in I Peter 5. 13 = 1038, and $1038 = [3 \times 346]$, and $[3346 - 2718] = [314 \times 2]$
 $1038 + [103 \times 8] = [207 \times 9]$ MINUS ONE $\Psi + \Psi$ in Psalm 87. 5 = $[314 \times 2]$

Yes, it did! Let me give you an illustration of the fact. Upstairs I have a bass cornamuse whose body is made from resonant mahogany. All the way down one side it is marked by a jagged thin brown line. That jagged line records the tale of a tree which was once struck by lightning, and it constitutes a permanent seal.

Listen to II Corinthians 1. 21-22.

Now he which stablisheth us with you in Christ, and hath anointed us, is God; Who hath also sealed us, and given the earnest of the Holy Spirit in our hearts.

Even in its original perfection, the first creation was ordained to be provisional. The new redeemed creation will be eternal. We who have been redeemed can wait for that new creation in confidence. Why? Because the same Holy Spirit who placed his seal upon the first creation has been given to us as a promissory deposit, and he will sustain us while we journey home. Our homeward journey may be stormy: but with Christ in the vessel, we can smile at the storm.



If people would spend their time in working at the Bible’s gematrical jewels, you think, rather than in watching television, they would have something to smile about. As Jonah said, *They that observe lying vanities forsake their own mercy.*

‘Jonah had his own equation,’ says Greta. ‘*Salvation is of the LORD.*’

SOME NUMERICAL FACTS FOR YOU TO CONSIDER

[1.] We saw in chapter 7 that the Hebrew word beth-resh-aleph (= he created) had a 400 gematric value of 203. Well, now! The triangular number of 203 is 20706, and the triangular number of 20706 is 214379571. When the number 214379571 is folded up like a penknife, it becomes $[214 + 379 + 571] = 1164$.

[2.] In 400 Hebrew gematria the first word of the Old Testament (בראשית) adds to 913, and in 800 Greek gematria the first word of the New Testament (βιβλος) adds to 314. The product of 913 and 314 is the palindromic number 286682. Note that $286682 = [23^4 + 3^8 + 4^4 + 24]$, and that $[234 + 38 + 44 + 24] = 340$. What is 340?

[3.] 545 denotes minus one in terms of *what-it-is*, and 1369 denotes minus one in terms of *how-it's-made*. When 545 and 1369 are subtracted from the 4122 of the holy mountain, the 2208 of a four-alphabet Parbar appears. That's not all.

$$2208 = 46 \times 48, \text{ and } 4648 - [\text{the sum of the prime factors of } 2605] = 4122$$

[4.] The string-length-plus-time numbers of chapter 15, like some of the numbers mentioned on page 699, are *speaking combinations*. So are 2676 and 2079.

$$1181 \text{ (which conjoins the four quantities of Euler's Identity) } + 1495 = 2676$$

$$2605 - [\text{the sum of its prime factors } 5 \text{ and } 521] = 2079$$

See if you can find and explain any more of these combinations.

[5.] Genesis 1. 1 has a 400 Hebrew gematric value of 2701. Its first word (בראשית) has 400, 22, 406, and 28 gematric values respectively of 913, 76, 1819, and 208. The twelve digits of these four values may be arranged to give the four three-digit numbers 913, 761, 819, and 208, which add up to 2701. Furthermore, the first Hebrew letter of Genesis 1. 1 (ב) has 400, 22, 406, and 28 gematric values respectively of 2, 2, 412, and 34. Look at the equation which follows.

$$412 - 2 - 2 - 34 = [300 + 74], \text{ and } [300 + 7^4] = 2701$$

[6.] You may recall that the mathematical work of an unnamed person appeared on pages 470-472. I discern a queen's authorial hand in three New Testament verses: I Peter 5. 13 (first six Greek words), II John 13 (nine Greek words: no *Amen*), and Titus 3.12. In 800 Greek gematria these three passages add up respectively to 3642, 4509, and 8309, while the Greek names of Peter, John, and Paul add up respectively to 755, 1119, and 781. The queen of whom I speak has a Greek name (Σαλωμη = Salome) whose 800 gematric value is 1079. See if you can construe the equation which follows.

$[3642 + 755 + 1079] + [4509 + 1119 + 1079] + [8309 + 781 + 1079] = 22352$
22352 is the long-hexagonal pyramidal number of 32 ($1 + 6 + 15 + 28$, etc.). Furthermore, $22352 = 1016 \times 22$, and $1016 + 22 = 1038$, the 800 gematric value of Συνεκλεκτη (= Elect-with-you), so we may read the number 22352 as a signature.

$4509 - 3642 = 867$, and $8309 - 4509 = 3800$, and $867 + 3800 = [486 + (37 \times 113)]$, a number which relates to Euler's Identity (see page 638). On page 576 the number 1038 appeared in connection with *e*, and on page 563 the Greek word ωρχησατο (= danced) appeared in connection with *i*. If we accept that both the young Esther and the young Salome engaged in mathematical studies, we may wonder whether knowledge was transmitted over time from one palace to another. Here is what we can say with certainty. For some particular reason, and in some particular manner, *Herod Antipas saw his stepdaughter Salome as a second Esther*. That fact explains why Herod, echoing Ahasuerus, offered Salome whatever she wanted 'unto the half of my kingdom'. Both Ahasuerus and Herod thought fit to articulate *the mathematical fact of the octave ratio*. Why so? Perhaps because Esther and Salome were both musical mathematicians.

HOW MUCH MORE CAN YOU FIND IN GENESIS 1. 1?

בראשית ברא אלהים את השמים ואת הארץ

Here are the 400, 22, 406, and 28 gematric values of the seven Hebrew words which make up Genesis 1. 1.

| | <u>400</u> | <u>22</u> | <u>406</u> | <u>28</u> |
|--------|------------|-----------|------------|-----------|
| בראשית | 913 | 76 | 1819 | 208 |
| ברא | 203 | 23 | 1033 | 115 |
| אלהים | 86 | 41 | 301 | 121 |
| את | 401 | 23 | 517 | 58 |
| השמים | 395 | 62 | 566 | 143 |
| ואת | 407 | 29 | 529 | 70 |
| הארץ | 296 | 44 | 731 | 119 |

[1.] The four values of ברא add up to 1374, and the 406 values of all seven words add up to 5496. Divide 5496 by 1374, and then subtract 1374 from 5496.

[2.] What is the sum of the four values of את (401, 23, 517, and 58)?

[3.] Look at the seven 406 values (1819, 1033, 301, 517, 566, 529, and 731). The second and third values may be concatenated to give the palindromic number 1033301, while the remaining five values may be added up to give 4162, or 2 x 2081. You remember that 2081 belongs to the three-dimensionalized hexagonal series which I unsealed on page 626 (1, 33, 173, 505, 1113, 2081, and so on).

1 8 1 9 1 0 3 3 3 0 1 5 1 7 5 6 6 5 2 9 7 3 1

[4.] Is there anything notable about the sum of the *digital products* of all twenty-eight gematric values? ($9 \times 1 \times 3 = 27$, $2 \times 0 \times 3 = 0$, $8 \times 6 = 48$, and so on.)

[5.] Consider the *digital roots* of the seven 406 values. (The 400 gematric value of any Hebrew word has the same digital root as its 22 value. Likewise, the 406 gematric value of any Hebrew word has the same digital root as its 28 value.)

- 1 + 8 + 1 + 9 = 19, and 1 + 9 = 10, and 1 + 0 = 1, so the digital root of 1819 is 1.
- 1 + 0 + 3 + 3 = 7, so the digital root of 1033 is 7.
- 3 + 0 + 1 = 4, so the digital root of 301 is 4.
- 5 + 1 + 7 = 13, and 1 + 3 = 4, so the digital root of 301 is 4.
- 5 + 6 + 6 = 17, and 1 + 7 = 8, so the digital root of 566 is 8.
- 5 + 2 + 9 = 16, and 1 + 6 = 7, so the digital root of 529 is 7.
- 7 + 3 + 1 = 11, and 1 + 1 = 2, so the digital root of 731 is 2.

1 7 4 4 8 7 2

1744 is 872×2 , so the numbers 1744 and 872 articulate the octave ratio 2 : 1. (They also allude to a dream-world of Sierpiński carpets and zeolite codes.) The ratio 1744 : 872 represents a kind of Doppler Shift away from the 1728 : 864 octave which we might have expected. It laughs at the superstition that human intellect will one day comprehend all creation. And it declares that heaven will present the redeemed with many surprises. Listen! When you study the 406 and 28 gematria of Genesis 1. 1, be reverent. Remember the Corsican proverb: *A chi mangna u pani di u preti, bisogna à dibbità lu* (= A person who feeds on holy bread has to deserve it). Don't expect to find what you think you ought to find, and don't expect to understand everything at once. By the way, $[1744 + 872] = 2616$, and $[6162 - 2616] = 3546$. Furthermore, $3546 + [26 \times 16] = 3962$.

WHAT MAY BE A BASIS FOR PRACTICAL EXPERIMENT

The late John Kanzius used a radio signal to break the chemical bonds of salt water. On a *d*-string which is 864 units long, the note *b*'' is generated by a section having a length of 128 units. If a speaking combination of the note *b*'' and a beam of suitably concentrated light turns out to work more efficiently than the RF signal of John Kanzius, then shall be brought to pass the equation that is written below.

$$\text{תהו ובהו} = \text{המים} + \text{excites} + \text{אור}$$

Jonah had to deal with a lot of salt water. Whether or not we are interested in chemistry, we can all remember Jonah's equation: *Salvation is of the LORD*.

We can also take note of two numerical facts. The seven terms of Delia's comprehensive formula may be condensed to give the number 318, and the gearbox of page 695 may be condensed to give the number 644.

$$[318 + 644] = 962$$

There is a message in nine, six, and two. You see, teth is the ninth letter of the Hebrew alphabet, wau is the sixth letter, and beth is the second letter, so the number 962 articulates the word טוב (teth-wau-beth: 'good', or 'goodness').

That's not all. The reversal of 962 is 269. In 400 Hebrew gematria the word aleph-beth (= Father) has a value of 3, the word beth-nun (= Son) has a value of 52, and the word resh-wau-cheth (= Spirit) has a value of 214.

$$[3 + 52 + 214] = 269$$

If you read backward the six digits which appear on the left side of the equal sign above, you will find not only the holy mountain 4122, but also אבן, the missile of Daniel 2. 45 (aleph-beth-nun = 53 in 400 gematria).

כל קבל די חזית די מטורא אתגזרת אבן די לא בידין

Forasmuch as thou sawest that the STONE (אבן = 53) was cut

OUT OF THE MOUNTAIN (מטורא = 256 = {[4 x 1]²}) without hands.....

One final lesson. The rules of Hebrew gematria apply equally to Aramaic, the language in which Daniel writes part of his book (from 2. 4b to 7. 28). Now you can claim to have worked gematrically in all three of the Biblical languages.

'Plus Yiddish,' says Lettuce Girl.

א דאַנק (= A *dank*)! I had forgotten our brief encounter with Yiddish gematria. Never mind. Here are two equations that you may care to remember.

$$[318 + 644] = 962, \text{ and } 269 = [3 + 52 + 214]$$

Everything in creation will unite to express the GOODNESS of the HOLY TRINITY. If you want to see a depiction of the Three-in-One, reverently add 962 to 269.

What more is there to say? Now that my solemn tale is told, important things are waiting to be done. One of our local parks is getting rid of twenty-four rose-bushes! The ranger has asked me to come and collect them before closing-time.

'I'll hitch up a trailer and drive you to the park, dear,' says Delia selflessly. 'Then you'll feel obliged to give me a portion of the swag. Farewell, everyone.'

Hark, the phone! Is it Zygol Squid? No, it is one who has wrestled with a riddle, and prevailed. Colin Tate has brought together the last paragraph of page 551, the first paragraph of page 552, and the two ladies of the front cover. Well done!

יָרַח (= moon) + אֹר (= light) + הַדְּלֵת (= the door) = 864

חִכְמָה (= Wisdom) + הַשּׁוּלְמִית (= the Shulamite) = 864

Gentle reader, chapter 32 is really a list of things for you to do. I'm going to say farewell by reciting the last forty lines of Robert Browning's poem 'Abt Vogler'. All the land is before thee! May the LORD be with you until we meet again.

*Well, it is gone at last, the palace of music I reared;
Gone! And the good tears start, the praises that come too slow;
For one is assured at first, one scarce can say that he feared,
That he even gave it a thought, the gone thing was to go.
Never to be again! But many more of the kind
As good, nay, better perchance: is this your comfort to me?
To me, who must be saved because I cling with my mind
To the same, same self, same love, same God: ay, what was, shall be.*

*Therefore to whom turn I but to Thee, the ineffable Name?
Builder and maker, Thou, of houses not made with hands!
What, have fear of change from Thee who art ever the same?
Doubt that Thy power can fill the heart that Thy power expands?
There shall never be one lost good! What was, shall live as before;
The evil is null, is nought, is silence implying sound;
What was good shall be good, with, for evil, so much good more;
On the earth the broken arcs; in the heaven, a perfect round.*

*All we have willed or hoped or dreamed of good shall exist;
Not its semblance, but itself; no beauty, nor good, nor power
Whose voice has gone forth, but each survives for the melodist
When eternity affirms the conception of an hour.
The high that proved too high, the heroic for earth too hard,
The passion that left the ground to lose itself in the sky,
Are music sent up to God by the lover and the bard;
Enough that He heard it once: we shall hear it by and by.*

*And what is our failure here but a triumph's evidence
For the fullness of the days? Have we withered or agonized?
Why else was the pause prolonged but that singing might issue thence?
Why rushed the discords in, but that harmony should be prized?
Sorrow is hard to bear, and doubt is slow to clear;
Each sufferer says his say, his scheme of the weal and woe:
But God has a few of us whom He whispers in the ear;
The rest may reason and welcome: 'tis we musicians know.*

*Well, it is earth with me; silence resumes her reign:
I will be patient and proud, and soberly acquiesce.
Give me the keys. I feel for the common chord again,
Sliding by semitones, till I sink to the minor – yes,
And I blunt it into a ninth, and I stand on alien ground,
Surveying awhile the heights I rolled from into the deep;
Which, hark, I have dared and done, for my resting-place is found,
The C Major of this life: so, now I will try to sleep.*

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