

# Numerology

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# What is Numerology?

Numerology: *The study of the supposed mystical significance of numbers and their effects on human life.*

Numerology: *Silly number-based pseudoscience espoused by quacks and charlatans.*



# Nation of Islam Numerology

Louis Farrakhan, October 1995:



“There, in the middle of this mall is the Washington Monument, 555 feet high. But if we put a one in front of that 555 feet, we get 1555\*, the year that our first fathers landed on the shores of Jamestown, Virginia as slaves.

“In the background is the Jefferson and Lincoln Memorial, each one of these monuments\*\* is 19 feet high.

“Abraham Lincoln, the sixteenth president. Thomas Jefferson, the third president, and 16 and three make 19 again. What is so deep about this number 19? Why are we standing on the Capitol steps today? That number 19—when you have a nine you have a womb that is pregnant. And when you have a one standing by the nine, it means that there’s something secret that has to be unfolded.”

\* Actually 1619

\*\* He means the *statues* in the monuments



# Some Characteristics of Numerology

- disregarding or mixing of units (e.g., years with feet)
- dependence on base-10 representation
- focus on *shape* of number when written
- insignificant coincidences elevated (“law of small numbers”)
- assignment of meanings to specific numbers (“13 is unlucky”)
- use of invented units (e.g., “pyramid inch”)
- tweaking results to get the desired result
- unfalsifiability



# The Koran and the Number 19



Rashad Khalifa

- it has  $6 \times 19$  *suras* (chapters)
- it has  $334 \times 19 = 6346$  verses and the digits of 6346 add up to 19
- it has  $17324 \times 19$  letters
- the *Basmala* invocation has 19 letters in Arabic
- its first word, *Bism*, appears 19 times
- and so on



# Who is to Blame?



The Pythagoreans: (c. 6th century B. C. E.)

“Bless us, divine number, who generatest gods and men! O holy *tetraktys*, that contains the root and source of the eternally flowing creation. For the divine number begins with the profound, pure unity until it comes to the holy four; then it begets the mother of all, the all-comprising, all-bounding, the first-born, the never-swerving, the never-tiring holy ten, the keyholder of all.” (about the number 4)



# The Pythagoreans

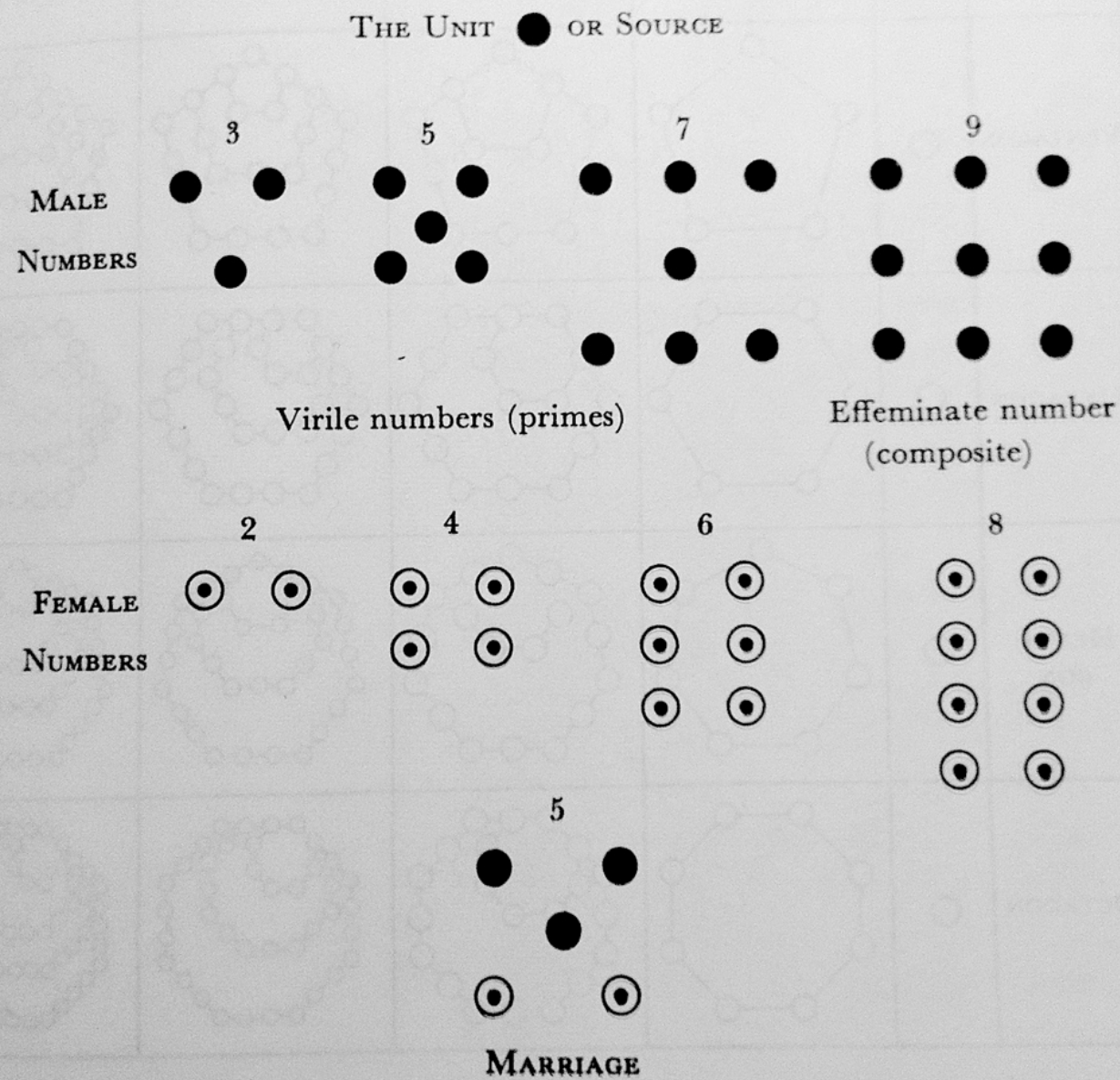


FIG 17. NUMBERS HAD SEX



# 666: The Number of the Beast

"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." (Revelation 13:18).

Code: A = 100, B = 101, C = 102, etc.

H I T L E R

$$107 + 108 + 119 + 111 + 104 + 117 = 666$$



# 666: The “Number of the Beast”

Ascii Code: A = 97, B = 98,  
C = 99, etc.

**ROMNEY** = 666



Code: A = 106, B = 107, C = 108,  
etc.

**BARACK** = 666





# 666: The “Number of the Beast”

Code: A = 1, B = 2, C = 3, etc.

Barack Hussein Obama II = 181  
+ 435 + 50 = 666



Willard Mitt Romney = 231  
+ 435 = 666





# Numerology in Physics



Mohamed El Naschie, “On John Nash’s crumpled surface”, *Chaos, Solitons, and Fractals* 18 (2003), 635-641:

“The Hausdorff dimension [of the Menger sponge] is given by  $D_{MS} = \ln 20 / \ln 3 = 2.7268$ . Note that the COBE temperature of microwave background ratio is found to be  $T_c(\text{COBE}) = D_{MS} K = 2.726 K$ .”



# Numerology in Physics



Arthur Eddington, 1938: thought the fine-structure constant was *exactly*  $1/136$ , and the number of protons in the universe was *exactly*  $136 \cdot 2^{256}$ .

Arthur Eddington, 1946: thought the fine-structure constant was *exactly*  $1/137$ .

Today's best estimate:  $\alpha = 1/137.035999084(51)$



# Numerology in Astronomy: Bode's Law



Planet	k	T-B rule distance (AU)	Real distance (AU)	% error (using real distance as the accepted value)
Mercury	0	0.4	0.39	2.56%
Venus	1	0.7	0.72	2.78%
Earth	2	1.0	1.00	0.00%
Mars	4	1.6	1.52	5.26%
Ceres <sup>1</sup>	8	2.8	2.77	1.08%
Jupiter	16	5.2	5.20	0.00%
Saturn	32	10.0	9.54	4.82%
Uranus	64	19.6	19.2	2.08%
Neptune	128	38.8	30.06	29.08%
Pluto <sup>1</sup>	256	77.2 <sup>2</sup>	39.44	95.75%

Table from Wikipedia



# The “Face” on Mars



Low-Res  
(Viking, 1976)



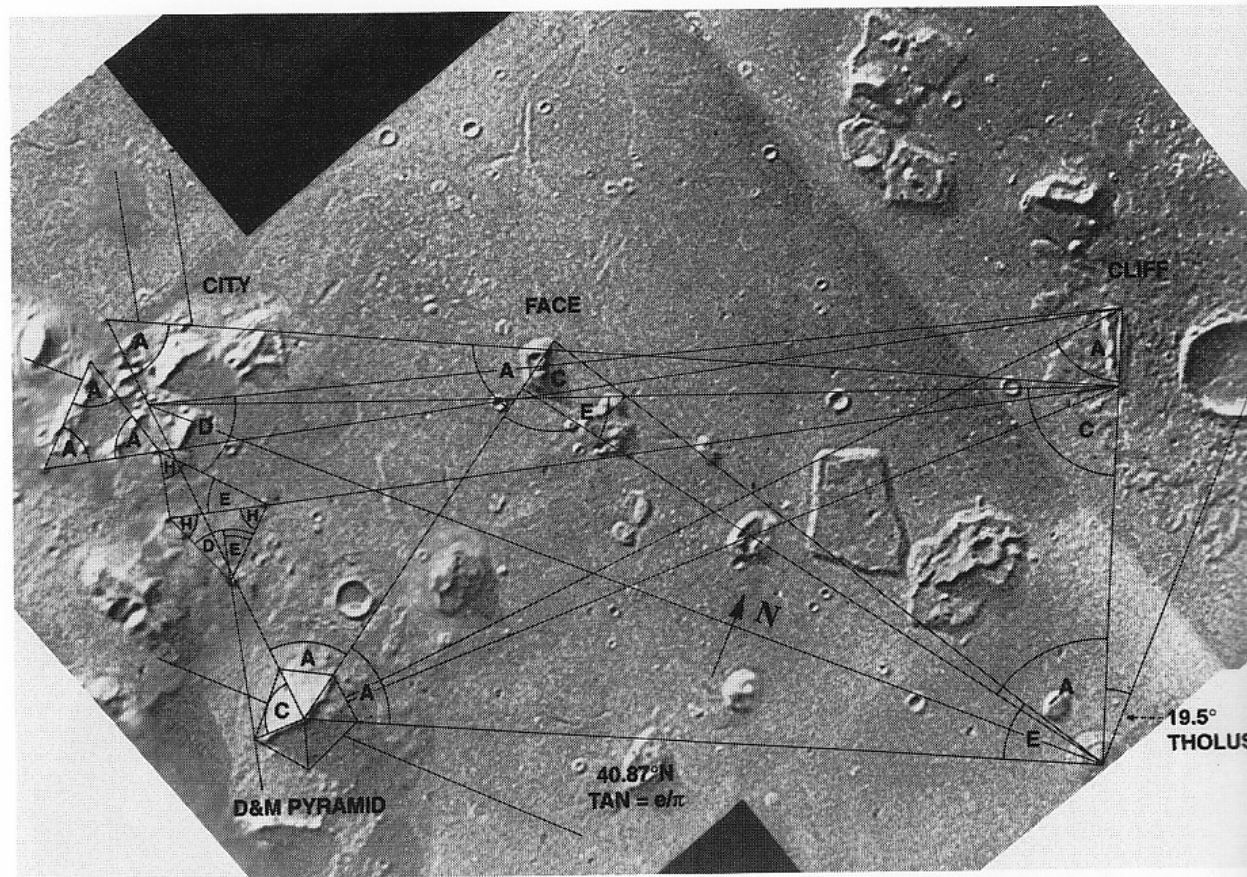
High-Res (Mars Recon.  
Orbiter, 2006)



# Hoagland's Face Numerology

$$\tan F = 1.174996...$$

$$\pi/e = 1.155727...$$



Angles		Angle Ratios	Trig.Functions
degrees	radians		
A = 60.0	$= \pi/3$	C/A = $\sqrt{2}$	TAN A = $\sqrt{3}$
B = 120.0	$= 2\pi/3$	B/D = $\sqrt{3}$	TAN B = $-\sqrt{3}$
C = 85.3		C/F = $\sqrt{3}$	SIN A = $e/\pi$
D = 69.4	$= e/\sqrt{5}$	A/D = $e/\pi$	SIN B = $e/\pi$
E = 34.7		C/D = $e/\sqrt{5}$	TAN F = $\pi/e$
F = 49.6	$= e/\pi$	A/F = $e/\sqrt{5}$	COS E = $\sqrt{5}/e$
G = 45.1		H/G = $e/\sqrt{5}$	SIN G = $\sqrt{5}/\pi$
H = 55.3		C/B = $\sqrt{5}/\pi$	SIN C = 1
I = 100.4		D/F = $\pi/\sqrt{5}$	TAN G = 1
			TAN I = $-2e$
			TAN 40.87°w = $e/\pi$



# Bible “Codes”

Doron Witztum



Eliyahu Rips



Yoav Rosenberg

MYSTATUTESANDMYLAWSANDISAACDWELTI  
NGERARANDTHEMENOFTHEPLACEASKEDHIM  
OFHISWIFEANDHESAIDSHEISMYSISTERFO  
RHEFEAREDTOAYSHEISMYWIFELESTSAID  
HETHEMENOFTHEPLACESHOULDKILLMEFOR  
REBEKAHBECAUSESHEWASFAIRTOLOOKUPO  
NANDITCAME TOPASSWHENHEHADBEENTHER  
EALONGTIMETHATABIMELECHKINGOFTHEP  
HILISTINESLOOKEDOUTATAWINDOWANDSA  
WANDBEHOLDISAACWASSPORTINGWITHREB  
EKAHHISWIFEANDABIMELECHCALLEDISAA  
CANDSAIDBEHOLD OFASURETYSHEISTHYWI  
FEANDHOWSAIDSTTHOUSHEISMYSISTERAN  
DISAACSAIDUNTOHIMBECAUSEISAIDLEST  
IDIEFORHERANDABIMELECHSAIDWHATIST

Claimed to find names of famous Rabbis hidden in the Hebrew Bible to an extent that could not be explained by chance.



# Bible Codes Debunked

- Brendan McKay, Dror Bar-Natan, Maya Bar-Hillel, and Gil Kalai
- showed the Witztum-Rips-Rosenberg results could be explained by “wiggle room” in deciding which variant of the rabbis’ names were used



# Numerology in Mathematics

$e^{\pi\sqrt{163}}$  an integer? Not really, but close:  
262537412640768743.999999999999999250072597198...

There's a deep reason behind this, which has to do with the "class number" of  $\mathbb{Q}(\sqrt{-163})$ .

$e^{\pi} - \pi = 20$  ? Not really, but 19.999099979...

This one seems to be a coincidence.



# The “Law of Small Numbers”

Richard Guy: “There aren’t enough small numbers to meet the many demands made of them.”

or

“Superficial similarities spawn spurious statements.”



# Example: Law of Small Numbers

Is  $8 \cdot 13^i + 183$  ever a prime?

Not for  $i = 1, 2, \dots, 32019$



# Numerology in Literature

Alistair Fowler, in *Triumphal Forms*, concocted a numerological argument involving Shakespeare's sonnets.

He wrote 154 sonnets of which numbers 99, 126, and 145 are irregular. Why those?

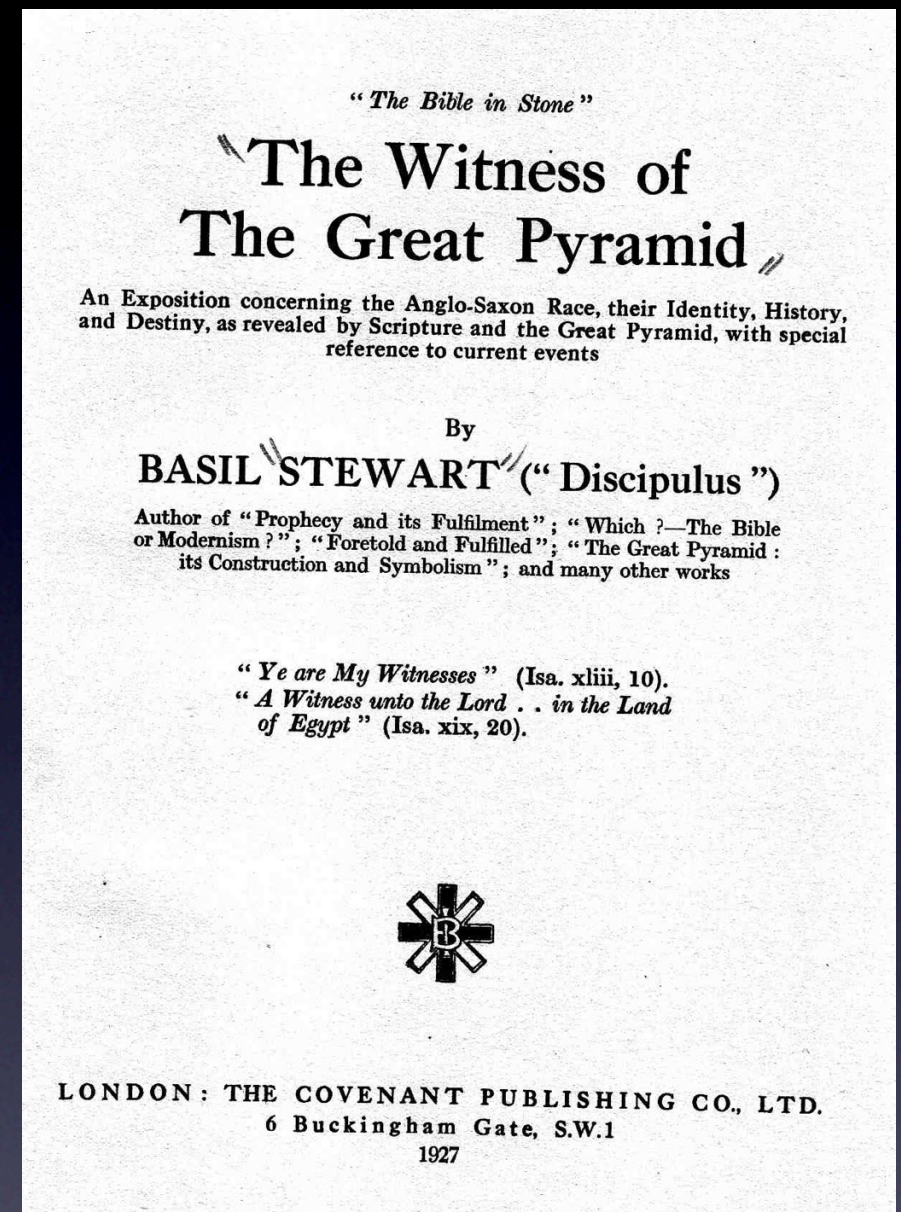
154  
152 153  
149 150 151  
**145** 146 147 148  
140 141 142 143 144  
133 134 135 137 138 139  
**126** 127 128 129 130 131 132  
118 119 120 121 122 123 124 125  
109 110 111 112 113 114 115 116 117  
**99** 100 101 102 103 104 105 106 107 108



# Eschatology

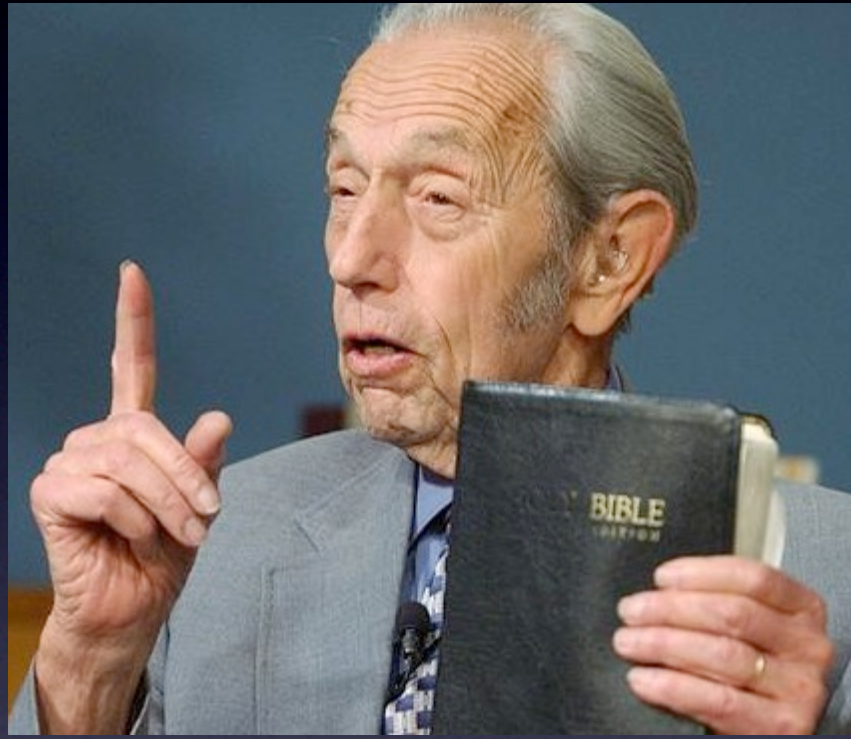
Basil Stewart, writing in *The Great Pyramid*, predicted the end of the world for

- May 29-30 1928
- September 15 1936
- August 20 1953





# Eschatology: Harold Camping



Camping patiently explained how he reached his conclusion for May 21, 2011.

"Christ hung on the cross April 1, 33 A.D.," he began. "Now go to April 1 of 2011 A.D., and that's 1,978 years."

Camping then multiplied 1,978 by 365.2422 days - the number of days in each solar year...

Next, Camping noted that April 1 to May 21 encompasses 51 days. Add 51 to the sum of previous multiplication total, and it equals 722,500.\*

Camping realized that  $(5 \times 10 \times 17) \times (5 \times 10 \times 17) = 722,500$ . Or put into words: (Atonement x Completeness x Heaven), squared.

"Five times 10 times 17 is telling you a story," Camping said. "It's the story from the time Christ made payment for your sins until you're completely saved."

"I tell ya, I just about fell off my chair when I realized that," Camping said.

\*Actually: 722,500.0716



# David Stove on Numerology

"[N]o one actually knows, even, what is wrong with numerology. Philosophers, of course, use numerology as a stock example of thought gone hopelessly wrong, and they are right to do so; still, they cannot tell you what it is that is wrong with it. If you ask a philosopher this, the best he will be able to come up with is a bit of Positivism about unverifiability, or a bit of Popperism about unfalsifiability: answers which the philosopher himself will know to be unsatisfactory on various grounds, but which have in addition this defect, that they put numerology in the same boat as, for example, astrology. But numerology is actually quite as different from astrology as astrology is from astronomy." -- David Stove, "What Is Wrong With Our Thoughts?", chapter 7 of *The Plato Cult and Other Philosophical Follies* (Blackwell, 1991).



# Numerology in the Library

Dewey Decimal System Code for Algebra: 512  
 $512 = 2^9$

Dewey Decimal System Code for Numerology:  
133.335

$$133 + 533 = 666$$



# Numbers Are Like Gods

- Lots of people have a favourite one
- But no evidence they have any independent existence outside our minds
- And no evidence they have the power to influence our lives
- There are probably no numbers - so stop worrying and enjoy your life!



# For Further Reading

Underwood Dudley, *Numerology: Or, What Pythagoras Wrought*, Mathematical Association of America, 1997.

Martin Gardner, Farrakhan, Cabala, Baha'i, and 19, *Skeptical Inquirer*, Vol. 21, No. 2, March-April 1997.

Martin Gardner, The numerology of Dr. Rashad Khalifa, *Skeptical Inquirer*, Vol. 21, No. 5, Sept-Oct 1997