WHO INVENTED THE NATURAL LOGARITHMIC BASE "*e*"? GOD, MAN, OR BOTH?

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3/9/2021

REVOLUTION AGAINST EVOLUTION 3/9/2021 SHOW PITCH

1. The Natural Logarithm that is used to model the world around us was discovered by diligent scientists studying the fields of finance, mathematics, physics, chemistry. In science, we observe an orderly universe with periodicity and systems which obey laws, all of which we can express mathematically. We begin with a non-technical explanation of the who, what, where, when, and why of "*e*", the natural logarithmic base.

2. As we read in the Bible, God gave Israel the Law, but when they began to add to what God had given, the Law became mired in the traditions of men. Similarly, the good laws of nature put into being by the spoken Word of God have been annexed with transcendentalism and concepts of irrationality. We give a few examples of how "*e*" is currently defined in mathematics, and how some of these definitions have somewhat distorted the true natural logarithmic base we observe in Nature.

3. There are examples of "*e*" approximated in the Bible, including one example of how "e" could have come to exist during the Genesis Creation Account. The presence of these Biblical examples makes it plausible that "e" was indeed invented by God for man to discover and use, but not to idolize.
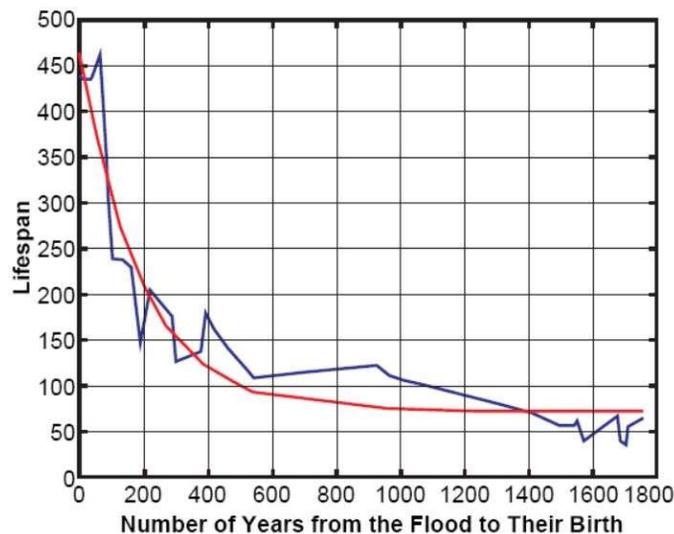

Figure 1. Post-Flood patriarchal life spans follow an exponential decay model, an example of the natural exponent in the Bible. After Holladay, 2016. ARJ

1. The Natural Logarithmic Base "e"

> ℹ️ *The Natural Logarithm that is used to model the world around us was discovered by diligent scientists studying the fields of finance, biology, physics, chemistry. In science, we observe an orderly universe with periodicity and systems which obey laws, all of which we can express mathematically.*

A. Exponents and logarithms give us the ability to express large quantities using smaller, more manageable numbers.

B. Exponentials in mathematics are used to express growth or decay over time. Logarithms are used to express the time it takes for a certain amount of growth or decay to occur.

C. Base-10 logarithms are used to characterize the magnitude of earthquakes and intensity of sound (decibel)

D. Base-e logarithms are called Natural Logarithms. Base-e = Base (2.718)

E. Napier, 1618: Produced a table of natural logarithms using the constant.

F. Jacob Bernoulli, 1668: An account that starts at $1, and yields interest at annual rate R with continuous compounding, will accumulate to e^R dollars at the end of one year.

G. Leonhard Euler: Gave the constant its name "e" retained in his honor "Euler's Constant"
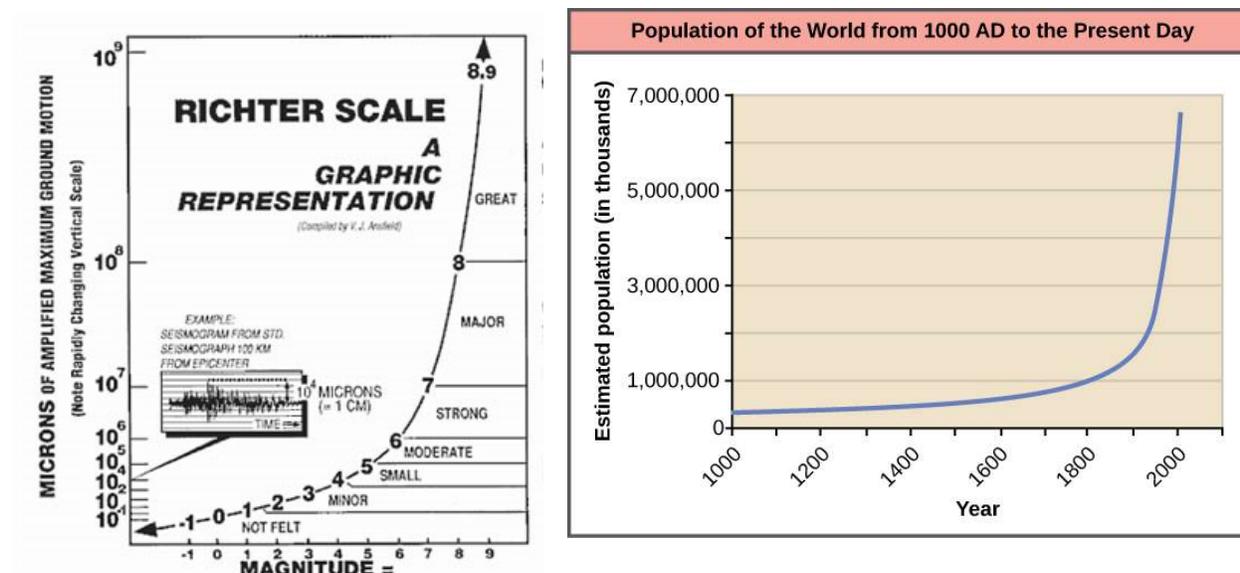

Figure 2. Two Examples of Exponential Growth: Richter Scale, Base-10 (left) and Population growth, commonly modeled with exponential growth formula, Base- "e".

2. How "e" is Currently Defined in Mathematics?

> ℹ️ *As we read in the Bible, God gives us good things, but when people try to add to what God has given, these things become idols. The transcendentalism and irrationality of the natural logarithm "e" are examples of mankind going down the philosophical "rabbit hole".*

A. Maclaurin Series: for e^x: Infinite series whose limit is "e^x"

Function	Maclaurin Series
e^x	$\sum_{k=0}^{\infty} \frac{x^k}{k!} = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \cdots$

B.

C. Transcendentalism: "e" is non-algebraic. It cannot be expressed as the root of a non-zero polynomial with rational coefficients

D. Euler and others: "e" is irrational, cannot be express as a ratio of two integers.

E. Georg Cantor: Father of Set Theory. There exist "uncountable numbers" i.e., non-one-to-one correspondence between the infinite set of natural numbers and that of the Reals. The set of Reals include the rational and irrational set. It is any number that one can put on a number line.

F. "e" is a Real Number that is transcendental, and uncountable. This is similar to non-reduceable complexity where there are numbers that just exist, but aren't "born" from natural, countable numbers.

G. Also "e" is a "normal" number. Normal distribution of terms over any range in any base. This means if you converted "e" to base 2 (binary), one would have a perfect heads-or-tails generator.

H. These concepts have been proven mathematically, using philosophical principles of proofs, and are true. But God warns us about the rabbit hole of philosophies and human traditions born out of these philosophies.

I. "e" is similar to the 613 Laws given to the Jews in the Mitzvot. But even though Christ fulfilled the Law it still accuses Him (healing, harvesting grain and eating on the Sabbath)

J. Similarities of "e" and the Law: The Law disqualifies everyone from salvation. "e" disqualifies any use of itself, because 2.718 is not "e" but merely an approximation. "e" is unattainable.

K. The Law stands as a whole or nothing at all. Similarly, "e" is strictly defined. Everything else is a "fake".

L. We know that grace is greater than the Law. Is there an expression of "e" that is greater than what we have now?

M. Creation is an expression of the riches of God, and through Christ, we have an inheritance of eternal life. Galatians 2:19-21*: For I through the law am dead to the law, that I might live unto God. I am crucified with Christ: nevertheless I live; yet not I, but Christ liveth in me: and the life which I now live in the flesh I live by the faith of the Son of God, who loved me, and gave himself for me. I do not frustrate the grace of God: for if righteousness come by the law, then Christ is dead in vain.*

N. I propose that there exists a "living "e" as opposed the "dead (flatline) "e" we have now.

3. Three Examples of "e" Approximated in the Bible

> ℹ️ There are examples of "e" approximated in the Bible, including one example of how "e" could have come to exist during the Genesis Creation Account. The presence of these Biblical examples makes it plausible that "e" was indeed invented by God for man to discover and use, but not to idolize

A. The Creation Function (CF) approximates "e" with every rotation of the logarithmic spiral.

B. However, "e" is developed and approximated via time-interval ratios; A new more accurate ratio for each rotation of the spiral. Could this be my "living "e"???

C. Current "e": defined as flatline limit of an infinite sequence. Not easily usable.

D. CF "e": Brought out by number in succession in a rotating fashion as described in the Word. Line upon line, precept upon precept. The way "e" is developed here is completely different than the current definition. Dead "*e*" accuses Living "*e*".

E. The Flood Timeline has at least four more examples of time-interval approximations of "*e*".

F. The Post-Flood Patriarchal age decay follows an exponential decay model. Fig 1

G. BONUS: There is even "π" in the table below 150 days/47 days. If you take 150/47.75 = 3.141. The Flood began on the 47th day of the year. Then 150 days of water. If you take ¾ of a day, that is noon (the 6th hour) in the Jewish day. On crucifixion day, Christ was put on the Cross on the 3rd hour and the darkness rolled in at the 6th hour.

Reference	Date Noah	Days	Total Days	Comment
Gen 7:11	1/1/600	0	0	Ark Assembly
Gen 7:11	2/17	47	47	Flood Begins/Rain/Fountains
Gen 7:24, 8:3,4	7/17	150	197	Ark Comes to Rest
Gen 8:5	10/1	73	270	Drying, First See Mtn. Tops
Gen 8:13	1/1/601	90	360	Remove Hull, See Dryness
Gen 8:14	2/27	57	417	Earth is Dry. Noah Disembark
Gen 7:12,17,8:6		40		Active Flood Time, (Noah sees)
Gen 8:6		21		Bird Wait/Drying Time
Gen 7:24		110	150-40	150 Days includes the 40 Days
Gen 7:17 thru 8:6	2/17-10/21	150 +73 +21	244	Time from Death to Life (TDTL)
Activity	Time Interval Ratio	=	Actual	Comment
Fountains/Rain	110/40	2.75	2.718	Napierian Log Base *e*
Flooding/Drying 1	197/73	2.70	2.718	Napierian Log Base *e*
TDTL/Drying 2	244/90	2.71	2.718	Napierian Log Base *e*
Drying 3/Bird Dry	57/21	2.71	2.718	Napierian Log Base *e*

Figure 3. Time-Interval Ratios Approximating "e" in the Genesis Flood Timetable