

Chapter 14

The Mystery of Numbers

The Mystery of Numbers and Number 19.

Sure, numbers are there, alright...but do they take you anywhere?

There is allure in numbers, and surprises and synchronicities, sometimes riddles. They pop up when we aren't even looking for them...and we look for them a lot. All of us do. Numbers on a check, on decks of cards, social media views, lottery tickets, bank accounts, clocks. We are this old in numbers. We've been married this long. Anniversaries. This is the number I was born on or my father died or the years I was sentenced to. Numbers.

One day its 7:47 am on the digital clock as you leave for work. Minutes later you're stuck in traffic and URA 747 is printed on the license plate of the car that barges in front of you. Then the guy on the radio says a 747 crashed. Maybe you make a mental note: *"huh...that's odd...sure been a lotta 747's this morning"*.

Oh yeah, of course, as it turns out, when you get home, you're on page 747 of that interminable mystery novel. And your kid turns seven tomorrow and there's still 47 items left on your to-do list and if you ever cared to write such things down, you'd realize that it's been 747 days since the last time something like this happened. So what? Really. So what?

OK. There's numbers floating around, and sometimes there are swarms of them. But do they take us anywhere? Or do they just seem to be inviting us into the worst kind of maze; a cold mathematical twilight zone, full of meaningless signposts leading nowhere, except perhaps into a tail-chasing descent into distraction...or worse.

The math goes on forever and the numbers never end.

It's surely not accidental and its likely not altogether meaningless. The problem is that it seems impossible to convincingly define their purpose or meaning, either to ourselves or to anyone else. But patterns are patterns, and patterns yearn to be described.

Of course, numbers have a function. We all know that. They made us study them for 12 years after all. Of course, numbers have a mystery. Most of us likely suspect that too. But all should take heed: infatuation with numbers can be extremely dangerous. Only the most balanced of personalities can truly indulge (or attempt to express) the fractal scope of numbers without becoming a gibbering idiot.

Why do I say this? Because I know. These last three years, I have somewhat inadvertently been drawn into the belly of the proverbial number beast. I had to. Eclipses are swimming in numbers. Their cycles and peculiarities are based in repetitions of time. Try describing time without numbers! It can't be done. So, on you must go. As soon as you enter the howling wind that blows through the four-dimensional kingdom of numbers, associations and synchronicities and equations start buffeting your fragile mortal mind.

I have returned to tell about it. Whew! My mind has emerged (still hinged, apparently) from the madhouse chatter of lonely numbers desperate to be heard.

If I had given voice to all the numbers that appeared as I wrote this book, the ones that tried to follow me to bed, babbling about how important they were, this work would be a diabolical zoo of digits. This book would be worse than worthless. It's got too many numbers as it is.

In the personalities section, you will read the cautionary tale of Norman Bloom, the “numbers man”. Once a promising musician in New York City, perhaps even a genius. After some business and artistic failures, he began to take interest in numerical patterns. It drove him mad. He began delivering staggeringly complex and often incomprehensible numerical tracts to world leaders, university professors and scientists. He was a regular caller to the radio host Larry King, who later mourned his death on air. Carl Sagan wrote an essay about him.

When the homeless Bloom died at 62, found dead in his ice cream truck, he left his family (whom he had long since abandoned) a storage unit stuffed with hundreds of boxes, each of them crammed with thousands upon thousands of papers- endless tracts jammed with number associations, astonishing theories based on numbers from the Bible, baseball scores, planetary distances and yes, license plates. Bloom's journey into madness is roughly outlined in the personalities section of this work.

Yet, in spite of the dangers and the weirdness, a certain level of the fractal synchronicity present in all things is reflected in numbers. They can't be ignored, but I have yet to read anyone who makes true sense of it. For myself, I came to the decision that I won't ignore them, but I'm not going to let them boss me around either. I can't pretend they aren't there. Obviously, numbers create order. But are they real? They're everywhere, it seems. But are they real?

I decided to approach the number phenomenon and offer them the dignity they maintain in music. Numbers in music represent beats or steps. They are not rhythm, but they describe rhythm. They are not chords, but describe chord progressions and arrangements (i.e. G7). We can agree music is in 4/4 or ¾ time. We can agree a major chord is composed of the 1st, 3rd and 5th notes of an octave.

When we listen to music, we notice a beat, we feel it, we may even groove to it. Maybe a few of us search it out and think about the beat for a while. But when we try and stop a song midway through to analyze the beat, what are we doing besides stopping the music? This is the danger of over analyzing and ascribing meaning to numbers themselves. They are fundamentally a heartbeat. You are supposed to move on. They are a foundation. They need to flow unimpeded. To turn away from a child, a flower or an eclipse to rant how your phone number matches the playoff game? It's possible with number addiction. Absurdity is always just a few numbers away.

Important!

It's not the numbers themselves that are important. It's the fact that the numbers are there. They are indeed making true patterns. We're not just making it all up at the casino. There really have been some honest 777's, jackpots in the dream of existence. Numbers swirl and clump and dance and disappear and reappear. I will throw some of them on the canvas like watercolor, because I would be a liar if I said they weren't there.

Numbers are all over eclipses. I make a note of their peculiarities sometimes, smile and then move on. But the fact they are there, patterned in some divine backdrop of mystery, does mean a lot to me. For myself, they are best scanned quickly and then returned to for a brief lark. They are funny, after all. They are musical beats. Or maybe echoes of a mathematical cosmic heartbeat or threads in a woven holographic dream. It's a mysterious language that God knows. I don't know it. I just see it's there.

Pythagoras

Pythagoras is considered the first Greek “philosopher” and first mathematician, one of the earliest teachers of ancient Greece. Born in 580 B.C., Pythagoras became one of the most well-known men in history. He influenced Socrates, Plato, and Aristotle. Pythagoras mixed math with spirituality and science. He is the author of the Pythagorean Theorem. It's often claimed that the word “philosophy” was invented by Pythagoras.

Pythagoras taught that reality is fundamentally mathematical in nature. Pythagoreans believed a system of divine principles existed behind numbers. The principles form a foundation for many concepts of traditional Western thought. One of these principles revolves around the notion of Divine Proportion, where all fundamental shapes can be found within a circle, or sphere.

Now, I turn to peculiarities involving the number 19.

Number 19

When I was a young man, in either high school or college (I can't distinguish now), I had a very strange dream. In the dream, I was a patron seated at a table in a shadowy music venue. Onstage, in the spotlight, was the famous silver-maned singer Kenny Rogers (“*The Gambler*” etc...), who was quite famous when I was a kid. In the dream, Kenny was singing a song on a small stage. I felt the sensation that this song was somehow important, so I watched and listened intently as he crooned.

Someone at my table was trying to distract my attention from Kenny, but I resisted the urge to turn away. He seemed to be singing about what to do when all else fails. Finally, Kenny Rogers, the Ol' Gambler himself, turned to face me directly. Okay. Here's Kenny with the microphone! He's telling me something I need to hear. The suspense was killing me.

The melody remains with me to this day though I only heard it once in a dream. I could sing it for you right now. Kenny sang this to me about what he does when all else fails:

“I turn to number...*nineteen*.”

Then I woke up. Huh? Kenny Rogers said what? I filed that odd dream away, but I never forgot it.

I'd had never given much thought to number 19 before that dream. I never gave 19 much thought after it either. I have gone most of my life without giving any consideration to the number 19, or any particular number, really, for that matter. Then I began to put this book together. It turns out that there are peculiar associations with the number 19. I'll admit right now I don't have the “meaning” for number 19, but here's some peculiarities.

19's power as a Prime Number is not the subject of this chapter.

The number 19 has unusual properties in mathematics, based on its status as a peculiar prime number. A prime number, of course, is one that is only divisible by itself. This is not the place to learn about any of those interesting relationships, which can be garnered from a quick internet search.

I am more interested in the Number 19 as it relates to astronomical patterns, particularly its appearance in eclipse studies.

Here are the three most important eclipse relations of 19.

1. A Saros cycle is exactly 19 eclipse years (19×346.62) The Saros are the main characters of eclipses, the particular geometric eclipse identities who return regularly to earth.
2. A Metonic cycle is exactly 19 solar years. (19×365.24) The Metonic cycle is the place where the solar, lunar, and eclipse calendars intersect every 6940 days.
3. The Saros Cycle equals 19 solar years minus one lunar year.
4. An eclipse year (346 days) is 19 days less than a solar year (365 days)

Here are some peculiar subsidiary patterns related to eclipses and the number 19.

- the first four digits of an eclipse year (346.6) when added make 19. $3+4+6+6=19$
- the first four digits of a lunar month (29.53) when added make 19. $2+9+5+3=19$
- the first four digits of the anomalistic month, moon's perigee to perigee, 27.55 when added also make 19. $2+7+5+5=19$
- 19 lunar years, or (19 times 354.37 days) equals exactly 6733 days $6+7+3+3=19$
- The digits of the number of days in the Metonic Cycle is commonly rounded and expressed as 6940, which itself contains the number 19 two times. $6+9+4+0=19$ as well as $69+40=109$
- The length of the draconic (eclipse month), where the moon passes one node to the next has been calculated at 27.2122210 (*year 2000 Eric Weisstein's World of Astronomy*). Those digits when added make 19. $2+7+2+1+2+2+2+1=19$
- The Saros Cycle is 18 years 11 days and 8 hours. Look at the numeric. $18+1$ from the front= 19 . $8+11$ from the rear also equal 19.

Perhaps some other properties and peculiarities might interest the reader:

Peculiar Math. The casting out of nines and the number 19

Both the number one and the number nine are the only two numbers that can be found by equation within all numbers without introducing any other numbers than themselves. Let me try and explain:

The number one is found everywhere. Any number divided by itself is one. No other number is needed to be brought into the equation. 147 divided by 147 equals one.

The number nine is found in all numbers in the process of the ancient mathematical concept of the "casting out of nines".

The number nine is obtained by adding the individual digits of any number greater than nine, then subtracting their sum from the original number, and then adding the digits of the new sum until you

are left with an individual number. You will get to 9. You'll see.

Here's how that works.

- 1) pick a number greater than single digits, perhaps your birth year: for instance: 1984
- 2) now add the individual numbers: $1+9+8+4 = 22$
- 3) subtract that new sum from your starting number: $1984 - 22 = 1962$
- 4) add the new digits: $1+9+6+2 = 18...$
- 5) then add $1+8 = 9$

whatever number you pick will eventually add back to 9 given this method. And yes, it only works for nine. Try it with your birth year. It's a fun party trick.

19 times 19 equals 361, far and away the closest number to the solar, lunar and eclipse year of any two whole numbers multiplied by themselves. The 361 day year is only four days removed from the 365 day solar year, and is used by the Bahai Calendar. The 360 day year was common in antiquity, and its properties of 60 are still reflected in our hours, minutes and seconds.

Turn that 361 (19x19) upside down and it starts with 19. 3 times 6 + 1 also equals 19.

19 in The Bible

Psalm 19 (from David) is the most famous psalm to assert that God's existence can be determined by observation of the astronomical universe.

*The heavens declare the glory of God; the skies proclaim the work of his hands.
Day after day they pour forth speech; night after night they reveal knowledge.
They have no speech, they use no words; no sound is heard from them.
Yet their voice goes out into all the earth, their words to the ends of the world.*

Psalm 19 1-4

The Psalms are the only part of the Bible that has been numbered from antiquity. The Psalms have retained their order for perhaps 2500 years. Psalm 19 has likely always been Psalm 19.

Psalm 119 is both the longest psalm and the longest chapter of the Bible. It has many unusual properties as well.

Chapter 19 of Genesis, the first book of the Bible, contains the destruction of Sodom and Gomorrah. (note: chapter numbers other than psalms became part of the Bible about 500 years ago)

Chapter 19 of Revelation contains the destruction of Satan and the final victory of God.

Isaiah Chapter 19 is the Judgment against Egypt

Luke Chapter 19 contains Jesus triumphal entry into Jerusalem

John Chapter 19 is the Crucifixion of Jesus. John 19:19 is the following:

Now Pilate wrote a title and put it on the cross. And the writing was:

JESUS OF NAZARETH

THE KING OF THE JEWS

John 19:19 (NIV)

- Each year it takes 19 days to observe all of God's annual Feast (Holy) days. These commanded yearly celebrations are the Passover (1), Days of Unleavened Bread (7), Pentecost (1), Day of Trumpets (1), Day of Atonement (1), Feast of Tabernacles (7) and Last Great Day (1)
- Discovered in 1947, the Dead Sea Scrolls were found east of Jerusalem. Among all the scrolls unearthed over the years, 19 copies of Isaiah the prophet have been identified.
- Mary (Jesus' mother), is mentioned 19 times.
- Two of the most important numbers in the Bible (and the world), are 7 and 12. When added they become 19. These are also the most important time keeping numbers. The 7 day week and the 12 month year. The typical clock has 12 visible hours.

From the Quran:

- 19 is the number of angels guarding Hell ("Saqr") according to the Qur'an: "Over it are nineteen" (74:30), after which the Qur'an describes the number as being "a trial for those who disbelieve" (74:31), a sign for people of the scripture to be "convinced" (74:31) and that believers "will increase in faith" (74:31) due to it.
- The Number of Verse and Sura together in the Qur'an which announces Jesus son of Maryam's (Mary's) birth (Qur'an 19:19).
- According to a few Islamic scholars, The Quran appears to have an unusual mathematical structure based on the number 19 ("Code 19"), which they argue proves divine authorship.
- The first verse of nearly every Surat in the Koran, the section known as Bas-malah, consists of 19 Arabic letters .

Bahai Faith:

- In the Bábí and Bahá'í Faiths, a group of 19 is called a Váhid, a Unity. The numerical value of this word in the Abjad numeral system is 19.
- The Bahá'í calendar year contains 19 months of 19 days each (along with the intercalary period of Ayyám-i-Há), as well as a 19-year cycle and a 361-year (19x19) supercycle.
- The Báb and his disciples formed a group of 19. There were 19 Apostles of Bahá'u'lláh, the Prophet of the Bahai.

A few more curiosities surrounding 19:

- The two most rapidly changing and bloodiest centuries in history were the 19th Century (1800's) and the 1900's (20th Century)
- Covid-"19" changed the world. The Spanish Flu's worst year was 1919.
- Tarot card number 19 is the Sun. Which I'm obliged to mention though I don't use tarot cards.
- The Saros Cycle of 19 eclipse years covers 18 years, 11 days and 8 hours. The number 19 is found forward and backward in that number with addition of three integers in either direction.
- The last eclipse of the 1900's took place on 8-11-1999, with a path that crossed numerous great civilizations throughout the Middle East and Europe. 8-11-1999 can be deconstructed as month and day $8+11=19$...year $19+99=118$... $11+8=19$ etc...
- The Saros that brought the USA 2017 eclipse was Saros 145. $14+5=19$. The Saros which brings the Valley of the Kings eclipse in 2027 is Saros 136... $13+6=19$
- 1919 saw two profound eclipses. Einstein's Theory of Relativity was proved by observation of the 1919 May 29 eclipse (JFK's second birthday). The 1919 Nov 22 eclipse began at sunrise over Texas 44 years to the day before JFK was murdered in that state.
- 5-14-1948 is the date of modern Israeli Independence. $5+14=19$. 19 years from 1948 brings you to 1967, when Israel took control of Jerusalem for the first time since 70 AD. $19+48$ also equals 67, for good measure. $5 \times 14 \times 1948 = 136,360$. 136 and 360 each have separate significance. Also you can add the digits and get 19.
- Lincoln's death day and Titanic sinking day of 4-15 both equal 19.
- King Tut was 19 when he died. The oldest known calendar in the world, the Egyptian, has its new year on 9-11. The Egyptian Revolution against the British happened in 1919.
- The US (or what became the US) first brought slaves to its shores in 1619. The last slaves in the USA to learn of their freedom were in Texas on 6-19 (Juneteenth).
- I've always liked that Steely Dan song, "Hey Nineteen". It stayed on the Billboard Hot 100 charts for 19 weeks back in 1981.

More Number Peculiarities- A quick look at Double Digit Repetition

There are consistent patterns of repeating double digits in the eclipse phenomenon.

- semester series eclipses (which occur within the same year) are 177 days apart.
- Lunar year eclipses occur usually 355 days apart.
- Hexon eclipses occur 1033 days apart.

- Hepton eclipses occur 1211 days apart.
- Heptons repeat in their cycle at 2422 days, 3633 days, 4844 days, and 6055 days. An entire Hepton Cycle takes 7266 days.
- Octon eclipses occur 1388 days apart,
- Back to back Octons become 2777 days or 7 years, 7 months and 7 days apart.
- Tzolkinex Cycle of 88 lunations becomes 2599 days.
- Hibbardina Cycles (almost half a Saros) occur at 111 lunar months or 19 eclipse seasons.
- John F. Kennedy (11-22), his brother Robert Kennedy (6-6) and Martin Luther King (4-4) all died from their assassins on double digit days. All are also connected in the same Eclipse Metonic.
- Curiosity: There was an eclipse on May 14 1771. 1771 is 177 in both directions. 177 years later was the Israeli Independence declaration on May 14 1948.
- An eclipse month (draconic month) is 27.21222 days. 7 eclipse months equals 190 days.

Quick aside: The number Seven

In eclipses the number seven is most found in the Hepton (“7-sided”) series. The Hepton Cycle features seven eclipses each 7 eclipse seasons apart occurring on the same day of the week. “Ancient Knowledge” from the wisdom schools of India and East Asia as reported in the century-old works of Ouspensky and Gurdjieff (*in Search of the Miraculous*) claim that the entire Universe is built upon a “Law of Seven”(and a “law of three”).

There are seven differing notes of musical scale. Seven days of the week. Seven seas. Seven continents. Seven visible “wandering” celestial objects: Sun, Moon, Mercury, Venus, Mars, Jupiter, Saturn. Seven in the Bible signifies completion.

Beginning with Seven days for Creation and finishing with Seven Judgments at the end, not to mention hundreds of sevens in between. Jesus said seven things from the Cross.

In common usage: lucky 7. Jackpots have three of them.

Eclipse Years and Numbers

The eclipse year is a real thing, a cosmic marker just as surely as the solar year. The only difference is perspective, in this case the perspective seems more cosmic, or divine. Eclipse year =346.62 days.

19 eclipse years is one Saros Cycle (18 years and 11 days and 8 hours solar time).

1000 eclipse years is about 949 solar years.

2000 eclipse years is about 1898 solar years.

For instance, the eclipse bicentennial of the USA didn't occur in 1976 but rather 1966.

The second eclipse millennium began around 1898.

The 2,000th eclipse anniversary of the birth of Christ was likely just before the turn of the 20th Century.

The 2,000th eclipse anniversary of the death of Christ was somewhere between 1925 and 1933.

The 2,000th eclipse anniversary of the destruction of the Jewish Temple in 70 AD occurred on Aug 21 1968. The USSR invaded Czechoslovakia that very anniversary day.