

**Who Will
Be the
Founding
Fathers of
Modern
Scientific
Astrology?**



**I DON'T BELIEVE IN ASTROLOGY. I'M A SAGITTARIUS
AND WE'RE SKEPTICAL.
-ARTHUR C. CLARKE**

**SAY WHAT YOU WILL ABOUT ASTROLOGY. IT'S STILL
MORE RELIABLE THAN STATISTICS.**

-DOC BENTON

**THE FOUNDING FATHERS
OF
AMERICA**

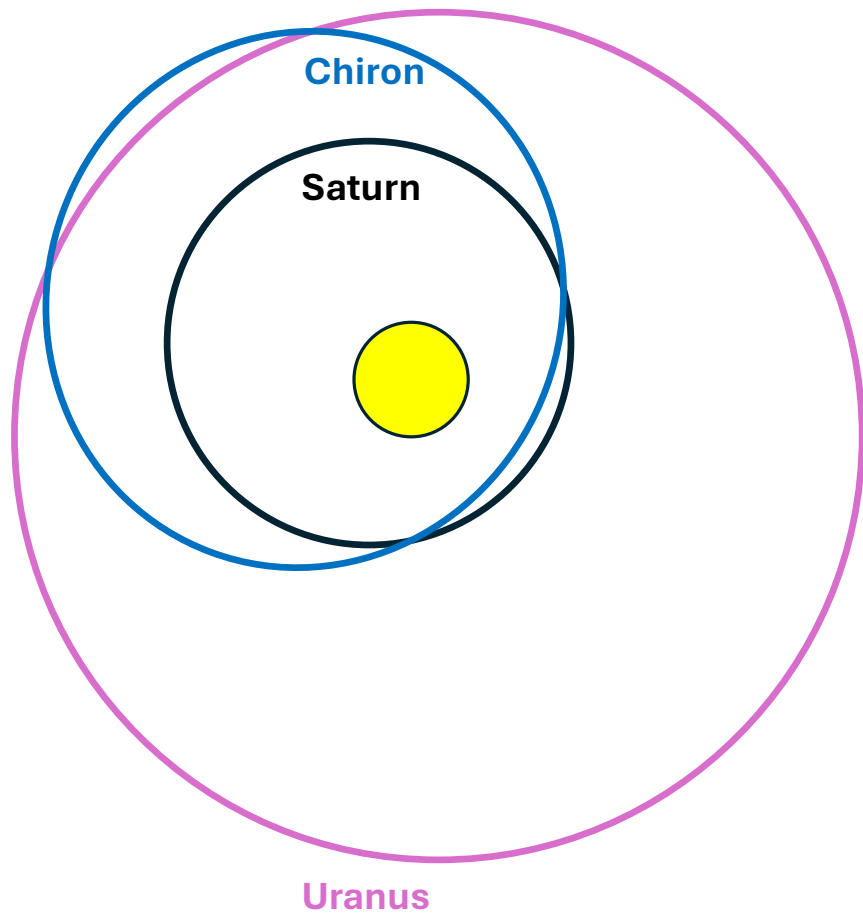
THE AMERICAN REVOLUTION TOOK PLACE OVER THE YEARS FROM 1765 TO 1783, AND AMERICA'S "FOUNDING FATHERS" ARE VIEWED WITH REVERENCE BY MOST AMERICANS AS THEY TEND TO SEE THEIR COUNTRY'S ORIGIN AS BEING JUST AS MUCH A SPIRITUAL EVENT AS IT WAS A PHYSICAL, HISTORICAL EVENT. ALSO, WHEN VIEWED FROM AN ASTROLOGICAL PERSPECTIVE, THE FOUNDING OF AMERICA HAPPENED DURING A TIME OF SOME VERY CRITICAL ASTROLOGICAL EVENTS.

**THE EXTRAORDINARY TIMES
AMERICA'S FOUNDING
FATHERS LIVED IN**

Saturn square Pluto	1760-1761	3 times
Saturn conjunct Uranus	1761-1762	3 times
Chiron opposition Neptune	1761-1764	9 times
Saturn square Neptune	1765-1766	3 times
Saturn square Chiron	1765-1766	3 times
Saturn opposition Pluto	1768-1769	3 times
Saturn square Uranus	1770-1771	3 times
Saturn conjunct Neptune	1773	1 time
Saturn opposition Chiron	1774-1776	5 times
Saturn square Pluto	1776-1777	3 times
Pluto enters Aquarius	April 4, 1777	
Chiron square Pluto	1779-1782	7 times
Saturn opposite Uranus	1782-1783	5 times
Saturn square Neptune	1783	3 times
Saturn conjunct Pluto	1786	3 times
Jupiter conjunct Chiron	June 16, 1787	
Jupiter/Chiron trine Neptune & Pluto	July 16, 1787	
Saturn square Chiron	1789	2 times

THE LIST OF PLANETARY ALIGNMENTS ON THE LEFT IS ENOUGH TO SHOW THAT THE AMERICAN REVOLUTION(1765-1783) TOOK PLACE DURING AN EXTRAORDINARY TIME. HOWEVER, OF ALL THE OUTER PLANETARY ALIGNMENTS THAT OCCURRED BETWEEN 1760 AND 1790, WHAT I WANT TO FOCUS ON ARE THE TWO OPPOSITIONS BETWEEN SATURN AND CHIRON THAT OCCURRED IN THE SUMMER OF 1776, THE CONJUNCTION OF JUPITER AND CHIRON, AND A SUBSEQUENT GRAND TRINE OF JUPITER & CHIRON WITH NEPTUNE AND PLUTO THAT HAPPENED DURING THE SUMMER OF 1787. BUT FIRST, LET ME SAY A WORD ABOUT HOW I UNDERSTAND CHIRON.

CHIRON



Chiron is a small heavenly body that orbits between Saturn and Uranus, and based on the stories in Greek mythology of the centaur Chiron, many astrologers interpret Chiron only with respect to wounding. However, if we understand the planets as representing psychological drives within us, then it makes little sense for us to have a drive to wound ourselves. Other astrologers, however, note that Chiron appears to be a bridge between the visible world (Sun through Saturn) and the invisible world (Uranus through Pluto), and my personal experience of Chiron and my experience through historical research is that Chiron is a drive within us that urges us to go beyond the world we can see. In that respect, Chiron nudges us toward a reality that is larger than the one we begin our lives with.

THE DECLARATION OF INDEPENDENCE

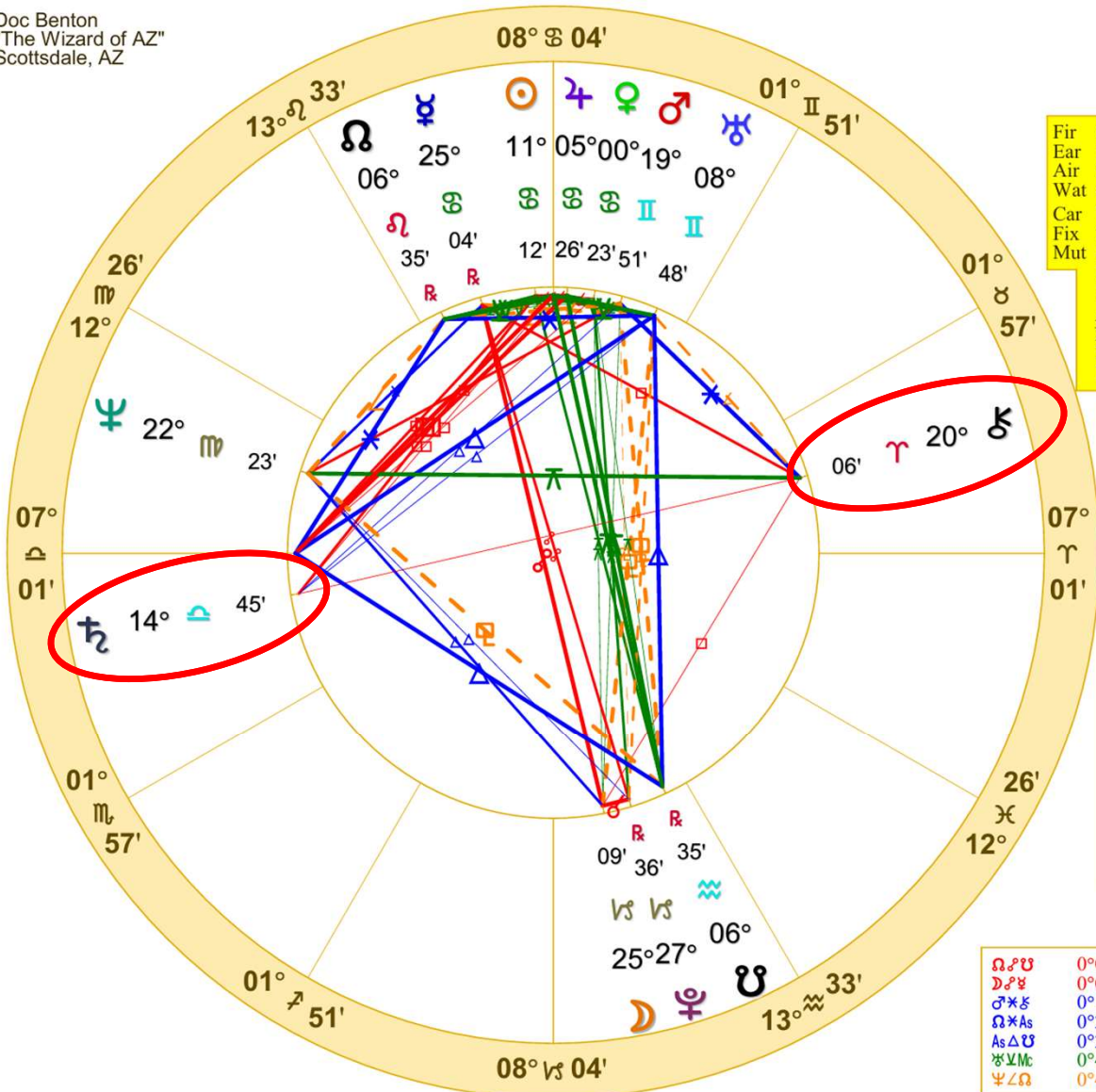
Doc Benton
 "The Wizard of AZ"
 Scottsdale, AZ

NATAL CHART

USA Libra

July 2, 1776
 11:50 AM
 Local Mean Time
 Philadelphia, PA
 39N57'08" 75W09'51"
 Time Zone: 0 hours West
 Geocentric
 Tropical Regiomontanus

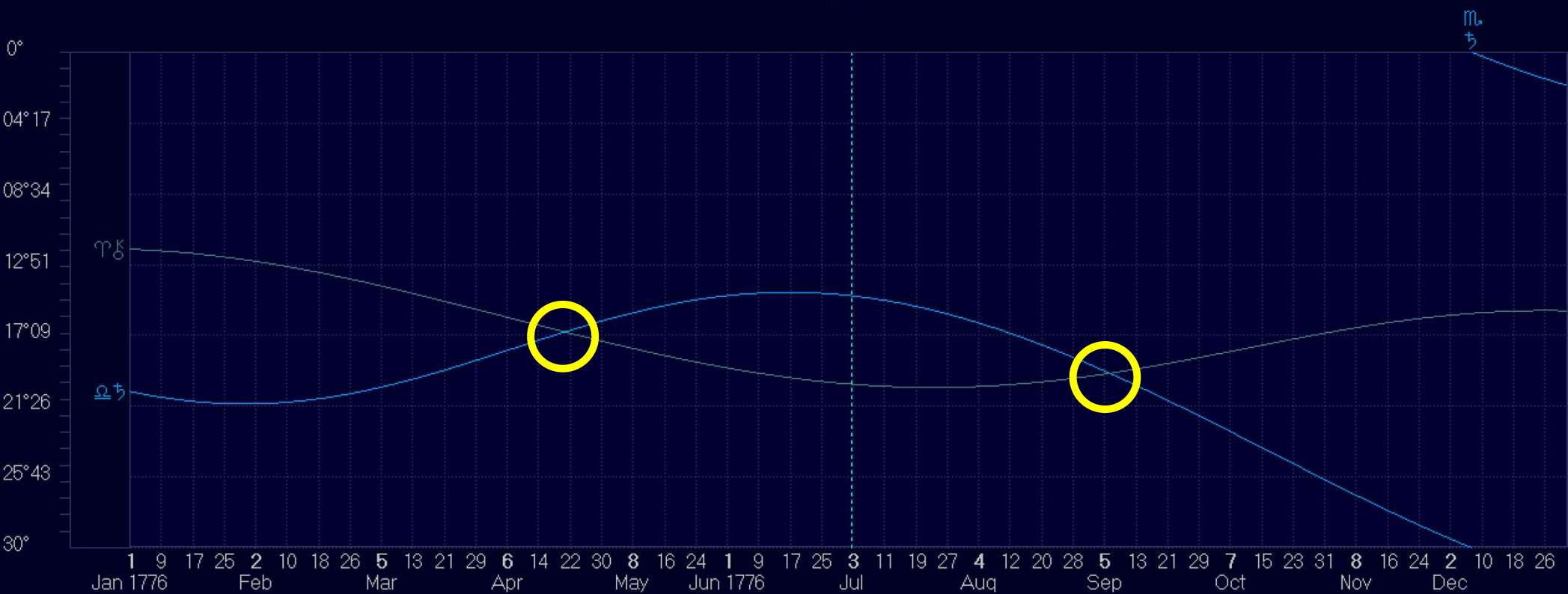
Fir	0	0
Ear	3	0
Air	3	1
Wat	4	0
Car	7	1
Fix	0	0
Mut	3	0
P	A	S
L	A	C
A	N	E
N	E	N
E	N	D
T		



	Long.	Decl.	Speed
☉	11 35 12'18"	23 N 00	0 57
☽	25 13 09'23"	20 S 06	14 17
♃	25 35 04R	17 N 50	0 19R
♀	0 35 23	23 N 29	1 13
♂	19 11 51	23 N 26	0 41
♄	5 35 26	23 N 17	0 14
♅	14 45	3 S 29	0 02
♆	8 11 48	21 N 43	0 03
♁	22 11 23	4 N 11	0 01
♂	27 13 36R	23 S 43	0 01R
♁	20 11 06	9 N 04	0 01
♁	6 11 35R	18 N 39	0 01R
♁	7 11 01	2 S 47	0 47
♁	8 11 04	23 N 13	0 54
♁	6 11 35R	18 S 39	0 01R

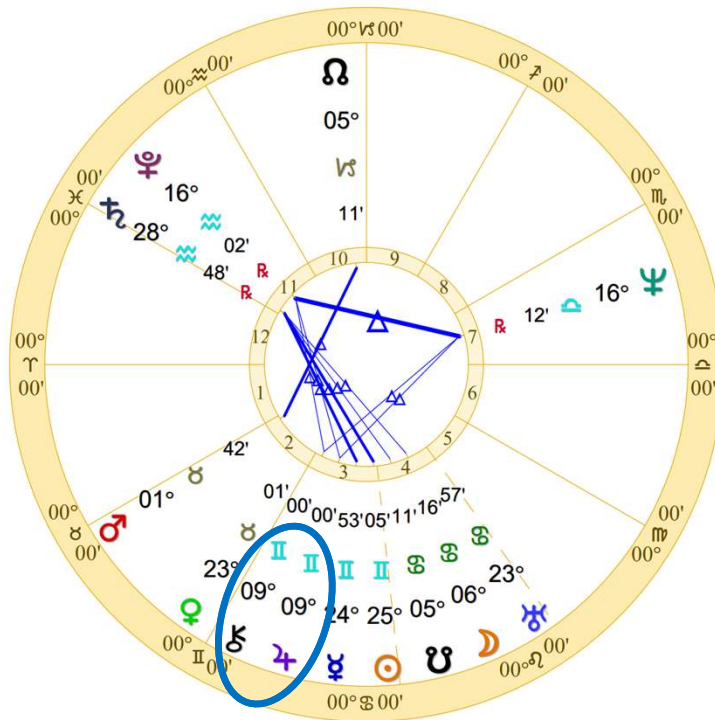
♁♂♃	0°00'a	♁♁♃	0°48's	♁♂♃	1°28's
♁♂♃	0°06's	♁♁♁	1°03's	♁♁♁	1°35's
♁♂♃	0°14'a	♁♂♁	1°09'a	♁♁♃	1°44'a
♁♂♁	0°26's	♁♂♃	1°09'a	♁♂♁	1°44'a
♁♂♃	0°26's	♁♂♃	1°15'a	♁♂♁	1°48'a
♁♂♁	0°45'a	♁♁♁	1°21's		
♁♂♁	0°48's	♁♂♁	1°28's		

30.00° Geocentric Longitude, Transit

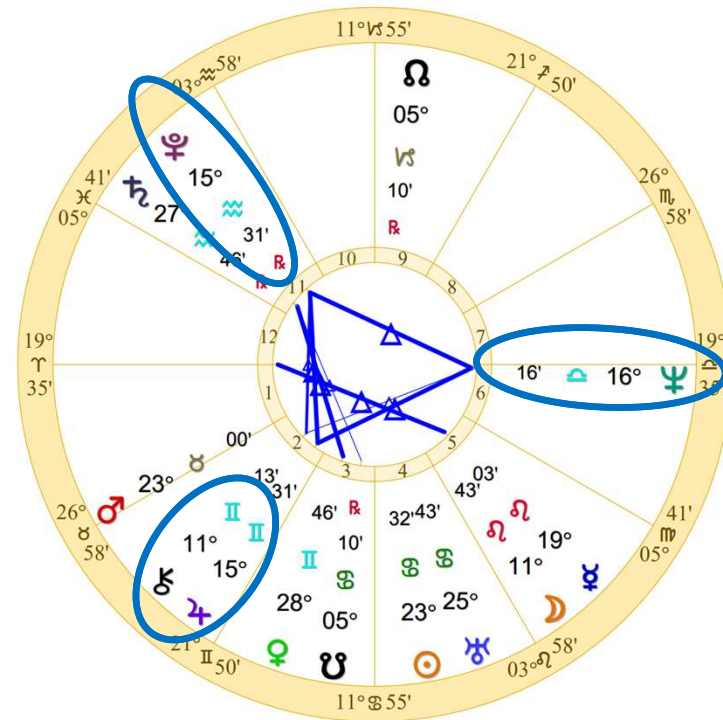


The passage of America's Declaration of Independence took place on **July 2, 1776**, and it occurred between two exact oppositions of Saturn in Libra and Chiron in Aries and shortly after Saturn was stationary direct. The spiritual nature of Chiron is reflected in this document in the words: **“We hold these truths to be self-evident, that all men are created equal.”** [Both planets direct from June 17 to July 23]

THE U.S. CONSTITUTION



Transits
June 16, 1787



Transits
July 15, 1787

The United States Constitution was written in the **summer of 1787**, and astrologically it was influenced by both a Jupiter/Chiron conjunction in Gemini and a grand trine involving Jupiter/Chiron in Gemini, Neptune in Libra, and Pluto in Aquarius. These aspects seeded the young country and the world at that time with lofty and transcendent ideas.



The opening words of the United States Constitution, **“We the people,”** reflect not only the higher spirituality of Chiron, but also the presence of Pluto in Aquarius that always shifts power from individuals to the people. And this brings us to the extraordinary times we now live in.

**THE EXTRAORDINARY TIMES
WE LIVE IN**

Today we find ourselves once again living in extraordinary times. The **Barbault Planetary Cycle Index**, a cumulative sum of the distances between outer planets, began to reach its low for the century at the beginning of 2020 just as Saturn and Pluto were conjunct each other and a powerful lunar eclipse, and it reached its absolute bottom on March 24, 2022, a month after the start of the invasion of Ukraine by Russia. Meanwhile, the December 2020 conjunction of Jupiter and Saturn signaled a shift from this conjunction occurring in **earth signs** to a new cycle occurring in **air signs** for the next 300 years.

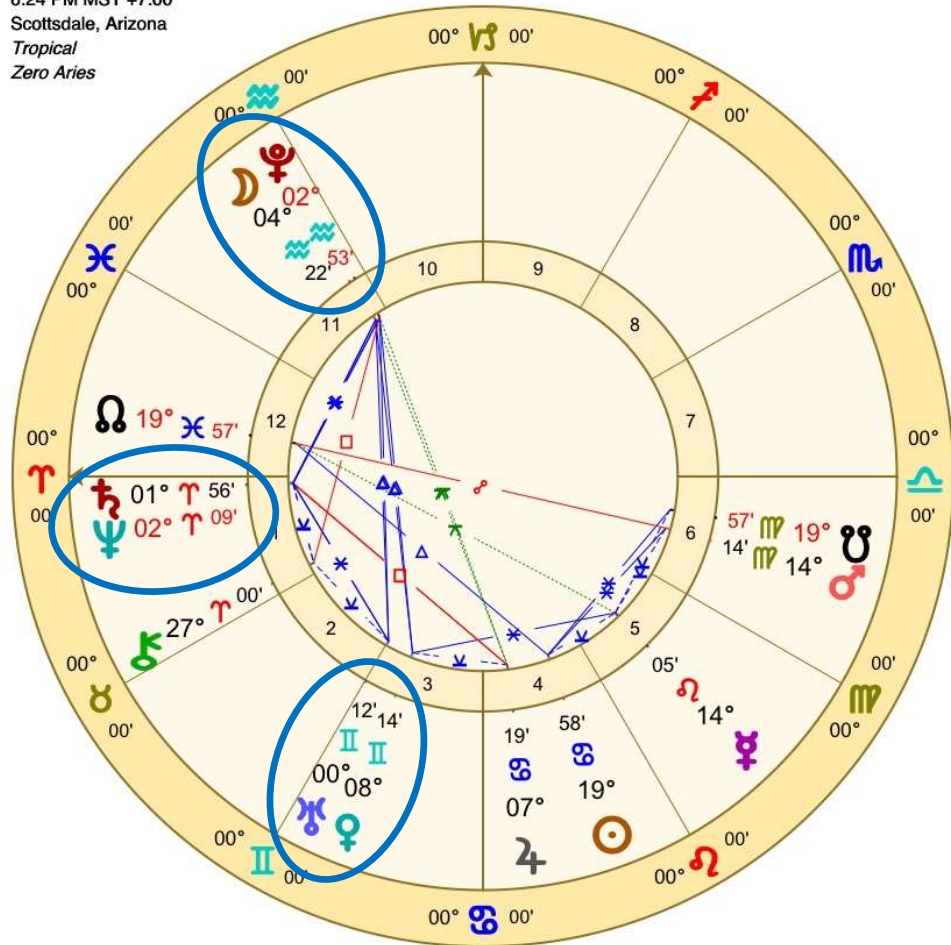
And on top of this, Pluto has moved into Aquarius, the United States has experienced a Pluto return and is still struggling to retain its democracy, there was a momentous solar eclipse in spring of 2024 with the Sun, Moon, and Chiron all exactly conjunct at 19 degrees, 24 minutes, of Aries, and soon after, America began the first of three Chiron returns. The astrological times they are a changin'!



Transits

Natal

Jul 11 2025, Fri
6:24 PM MST +7:00
Scottsdale, Arizona
Tropical
Zero Aries



Pluto --> Aquarius 11/19/2024

Neptune --> Aries 3/30/2025

Saturn --> Aries 5/24/2025

Jupiter --> Cancer 6/9/2025

Uranus --> Gemini 7/7/2025

In the 9-month period from November 2024 through July 2025, all of the traditional outer planets, Jupiter through Pluto, will change signs, and on 11 July 2025, there will be a mini-grand trine with Pluto, Moon, Saturn, Neptune, Uranus, and Venus, and Saturn and Neptune will be about as close to a conjunction as they will get in 2025

This is an extraordinary time for astrology, too, as it is using modern tools such as statistics, extreme case sampling, and well-crafted case studies, such as those done by André Barbault and Rick Tarnas, to shift astrology from mere fortune telling to being a modern scientific discipline. Additionally, evidence of connections between celestial and terrestrial events is coming, too, from scientific disciplines outside of astrology, disciplines with names like chronobiology and helio-biology, and also from non-astrological researchers who are, nonetheless, finding statistical results that confirm traditional astrology. And **if you are currently engaged in evidence-based astrological research, then YOU might be one of the “founding fathers” of this new, emerging form of scientific astrology!**



STATISTICS

In the early days of statistical analysis of astrology, many may have believed that more athletes would be born with Sun in Aries and more mathematicians would be born with Sun in Gemini. We now know, however, that things are not that simple. Furthermore, it should be assumed that most astrological effects, defined here as any link between celestial and terrestrial events, are both weak and subtle because otherwise we would not be able to modify them through free will. On the slides that follow, I'll show you ten essential studies but be aware that these studies are only the tip of a very large iceberg. Also, some of the lessons that have been learned over the years are:

1. Most astrological studies need large amounts of data in order to have enough statistical power to detect astrological effects
2. Single astrological factors, even when statistically significant, usually result in only small effect sizes
3. To achieve effect sizes that are moderate or larger, multiple astrological factors often need to be combined to form a more sophisticated astrological signature.

Raising the Hurdle for the Athletes' Mars Effect: Association Co-Varies With Eminence

Suitbert Ertel, PhD

This study improved upon Gauquelin's original methodology and removed a possible source of subjective bias by defining eminence in terms of the number of journal citations, and it showed that as eminence increases, the strength of the *Mars Effect* for athletes also increases.

The *Mars Effect* works best with a *quantitative* rather than *qualitative* assessment of eminence!

An Empirical Study of Some Astrological Factors in Relation to Dog Behaviour Differences by Statistical Analysis and Compared with Human Characteristics

Suzel Fuzeau-Braesch et al.

Meticulous records are kept of pedigree dogs for the first two months of their lives. These records typically include birth time, birth order, and behavioral characteristics. This study of 500 pedigree dogs, done by two French scientists, categorized their behavioral traits using a method developed by Eysenck and found that pedigree dogs with an angular Sun or Jupiter are far more likely to exhibit the extraversion dominant trait.

Angular planets affect other mammals, too!

An Automated Matching Test: Comparing Astrological Charts with Biographies

3

Vincent Godbout

The famous (or infamous) Carlson experiment purported to show that astrologers were unable to match horoscopes with personality traits as measured by the California Personality Inventory (CPI). Opponents of astrology saw this as further proof that astrology doesn't work while others were severely critical of Carlson's methodology, and still others [(S. Ertel, 2009) & (R. Currey, 2011)] found statistical significance upon re-analysis of Carlson's data. In this study by Godbout, keywords for natal charts were paired with keywords from individual biographies in an automated way, and charts were successfully matched with a significance level of $p < 0.0005$.

Artificial Intelligence can do chart matching!

On the Astrological Polarity in Extravert and Introvert Groups

Kyösti Tarvainen, PhD

Psychological literature classifies some professions as better suited for extraverts and others as better suited for introverts. Using the Gauquelin data, Dr. Kyösti Tarvainen gave each chart an extraversion score based upon the number of planets, Ascendant, and Midheaven in positive signs (Air or Fire), and he showed that individuals with higher extraversion scores are more likely to be drawn to extraverted professions ($p < 0.02$).

There are measureable differences between Positive and Negative Signs!

A Test of the Overall Validity of Astrological Statements in the Handbook by Sakoian and Acker

Kyösti Tarvainen, PhD

Dr. Kyösti Tarvainen has done numerous remarkable studies on what works and what doesn't in traditional astrology. In this study that used data collected by the Gauquelins, 316 astrological statements found in *The Astrologer's Handbook* by Sakoian and Acker were tested, and Dr. Tarvainen found that 180 statements in the handbook were correct while 136 were not correct. The overall p-value was $p = 0.001$.

Many, but not all, traditional astrological rules are statistically valid!

Correlation 35(1) 2022

Association Between Alignments of the Outer Planets and Global News Highlights – A Study of Mundane Astrology 1984-2021

Johnson Holt, PhD

This study by the late Dr. Holt changed what could have been a qualitative analysis of the relationship between conjunctions or oppositions of outer planets & mundane events into a quantitative analysis by comparing the number of news highlights at a selected online news site in a given year to the frequency of outer planet conjunctions or oppositions in that year or the previous year, and in 2023 Robert Currey showed that the strength of this association varies with orb.

Correlation 36(1) 2023

Correlation Between Outer Planet Cycles and World News Trends Over 38 Years

Robert Currey, BSc, [Hons], D.F. Astrol.S.

6

Mundane Astrology has validity!

Correlation 9(1) 1989

Purifying Gauquelin's Grain of Gold: Planetary Effects Defy Physical Explanation

7

Suitbert Ertel, PhD

This study by Professor Ertel showed that the Gauquelin *Mars Effect* is unrelated to astronomical variables such as distance of Mars from Earth, angular size, apparent magnitude, declination, right ascension, solar elongation, radius vector, geomagnetic activity, or Mars/Sun conjunctions. Whereas some effects of the Sun and the Moon on life on Earth have been linked by chronobiologists to changes in either light, gravity, or ocean tides, these findings by Ertel suggest that some astrological effects may have causes that are outside of our current understanding of physics.

Either new physics or new understandings of old physics may be needed to fully explain astrology!

Impact of the Lunar Cycle on the Incidence of Intracranial Aneurysm Rupture: Myth or Reality?

Youssef Ali et al.

In the ancient Babylonian calendar, the days of the New moon, 1st Quarter Moon, Full Moon, and 3rd Quarter Moon were regarded as both holy days and evil days – holy if you refrained from certain actions and evil otherwise. The study mentioned above found a significant increase in aneurysm ruptures around the time of the New Moon, and the next two studies found conditions that are more prominent at either the Full Moon or the Quarter Moons. Taken together, these studies confirm traditional astrological beliefs that tensions are greater around certain phases of the Moon.

The New Moon is linked with certain tensions!

Earth, Moon, and Planets, January 2001

9

Variations in the Mortality with Respect to Lunar Phases

Jaroslav Štreščík et al.

This study found increases in mortality associated with the 1st and 3rd Quarter Moons.

The Quarter Moons are linked with certain tensions!

Current Biology 23, August 5, 2013

10

Evidence that the Lunar Cycle Influences Human Sleep

Christian Cajochen et al.

Traditional astrology posits that one's mental state is more disturbed during a Full Moon, and this study provides confirmation through examining the quality of sleep during a Full Moon. The researchers found that in adults sleeping under controlled laboratory conditions during a Full Moon that delta brainwaves decreased by 30%, the time needed to fall asleep increased by 5 minutes, the length of sleep time decreased by 20 minutes, endogenous melatonin levels decreased, and the participants reported diminished quality of sleep.

New, Quarter, and Full Moons are linked with certain tensions!

A SUMMARY OF MY OWN RESEARCH

Much of my statistical research utilizes data from Astrodatbank which has both pros and cons. It contains tens of thousands of charts, but it also has a lot of missing data. For example, recent medical data is sparse due to privacy laws. I also focus primarily on tests for significant differences in proportions because this is probably how astrology originally developed, i.e. do certain events happen more frequently under certain astrologically configurations? Tests for significant differences in proportions give a more precise assessment of what astrologers have concluded by less formal procedures, and I check to see if my results replicate over different periods of time. Additionally, I am also involved in the development of mathematical models and proofs for branches of astrology that lend themselves to this type of analysis.

Some of my current studies are:

- A Brief Research Note on an Astrological Condition Related to Male-to-Female Transsexuality (*Correlation 36(1)*)
- An Updated Astrological Signature for Male-to-Female Transsexuality (*Correlation 36(2)*)
- Is Pisces More Likely to Have Heart Problems?
A Replication of a Dismissed Significant Result but with an Important Medical Astrology Twist (*Correlation 27(1)*)
- A Study on Links Between Pluto and Cancerous Tumors (*in progress*)
- The Unreasonable Effectiveness of Fibonacci Numbers in Astrology and the Natural Sciences (*in progress*)
- Essential Theorems for Harmonic Astrology (*in progress*)

Theorem 14 (The Fundamental Theorem of Harmonic Astrology): Suppose that m and n are natural numbers and that θ_m and θ_n are the corresponding m and n root harmonic angles. Also, denote the *least common multiple* of m and n by $lcm(m, n)$ and the *greatest common divisor* of θ_m and θ_n by $gcd(\theta_m, \theta_n)$. Then $gcd(\theta_m, \theta_n) = \frac{360^\circ}{lcm(m, n)}$.

Proof: Using Lemma 3 and Lemma 4 and definition 9, we have that $gcd(m, n) \cdot lcm(m, n) = mn \Rightarrow \frac{1}{lcm(mn)} = \frac{gcd(m, n)}{mn} \Rightarrow \frac{360^\circ}{lcm(m, n)} = \frac{360^\circ}{mn} \cdot gcd(m, n) = 360^\circ \cdot gcd\left(\frac{m}{mn}, \frac{n}{mn}\right) = 360^\circ \cdot gcd\left(\frac{1}{n}, \frac{1}{m}\right) = gcd\left(\frac{360^\circ}{n}, \frac{360^\circ}{m}\right) = gcd(\theta_n, \theta_m)$, and that completes the proof!

■

Example:

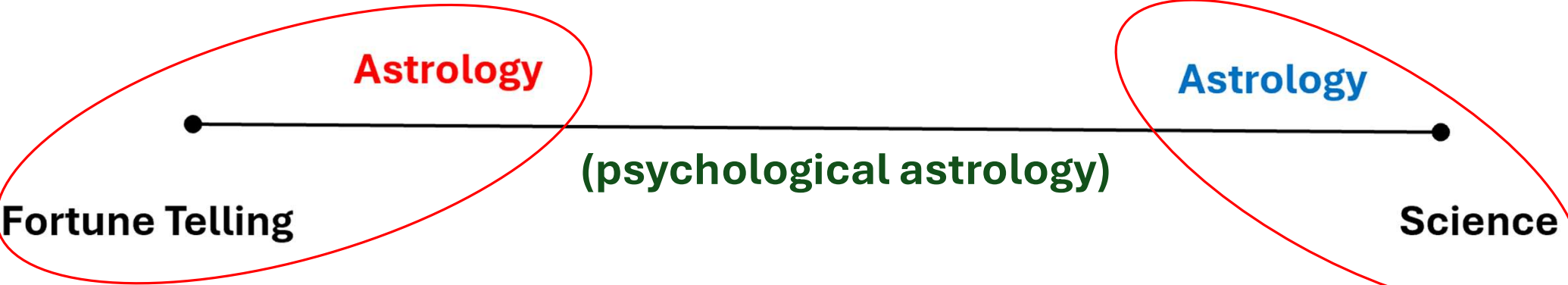
Given natural number harmonics 4 and 6, then the root 4 harmonic angle is $\theta_4 = \frac{360^\circ}{4} = 90^\circ$ and the root 6 harmonic angle is $\theta_6 = \frac{360^\circ}{6} = 60^\circ$.

Also, $lcm(4,6) = 12$ and $gcd(90^\circ, 60^\circ) = 30^\circ$.

Our theorem now says that $\frac{360^\circ}{lcm(4,6)} = \frac{360^\circ}{12} = 30^\circ = gcd(90^\circ, 60^\circ)$.

THE FUTURE OF ASTROLOGY

So what is the future of astrology? Well, that depends on us and others. One thing is certain, however. **Unless we continue to develop an evidence-based version of astrology, it will continue to be viewed by many simply as an unsubstantiated form of fortune telling that some will view as an entertaining novelty while others will see it as a dangerous delusion.** It is only when there is a preponderance of undeniable scientific evidence that others will begin to take the science of astrology seriously. Also, in my opinion, that preponderance of evidence, from both astrologers and non-astrologers, is already there. It just needs to be better known.



Which version of astrology will we choose for the future?

What some scientists view as only anecdotal evidence of astrology, I view as **case studies**, and when done with care, case studies in astrology are no different from the case studies that were done for decades in cultural anthropology in order to better understand new cultures or that are done today in the field mathematics education in order to understand how people learn mathematics.

Case studies are still an important source of information for astrology, but **the methodology has now been refined by astrologers such as David Cochrane (aka Santino Mancuso) who has utilized the technique of extreme case sampling in order to better understand the impact of various astrological factors while removing a possible source of sample bias. However, when feasible, extreme case sampling should be followed up by good statistical analysis.** Santino has also developed an “evidence-based astrological pyramid” that classifies evidence from case studies to meta-analysis according to the level of confidence associated with the evidence, and he has done a very well-designed statistical study of astrological correlates to bipolar disorder.

Currently, I see five sources of information about astrology that should be pursued, and each individual source can provide details that the others may miss. The five sources of information that I identify are

- **In-depth case studies**
- **Extreme case sampling**
- **Statistical analysis**
- **Mathematical modeling & theorem proving**
- **Artificial intelligence**



Case studies can provide meticulous details regarding how an astrological condition is manifesting. **Extreme case sampling** removes some bias in sampling and clarifies astrological effects by considering only the most extreme cases. **Statistical analysis** lets us know how likely what we've observed is just due to chance and how strong the effect is, and it is often seen as the gold standard for whether or not an astrological effect is real. **Mathematical models & theorem proving** can help to provide us with both a technical understanding and, upon interpretation, a conceptual understanding of what is really going on in astrology as well as guide us toward new astrological truths. And **artificial intelligence** can be used to identify and verify patterns in data that have been overlooked.

Also, as is done by many businesses and institutions of higher education, **modern evidence-based astrology** needs a **vision statement** of what we want the future to look like, a **mission statement** of what our particular role in achieving that vision will be, **long-term goals** that can help us fulfill our mission, **annual objectives** that support these goals, and a regular **evaluation** of our progress toward achieving those goals, and **actions to be taken** if we are falling short of our annual objectives.

Vision – To live in a world where astrology is understood both scientifically and experientially as a way to live in harmony with the cosmos around us.

Mission – To help bring about this vision through the utilization of mathematical and statistical skills.

Long-term Goals – (1) Review current literature and catalog what we currently know, (2) Engage in statistical analysis, (3) engage in the mathematical analysis of technical aspects of astrology, and (4) work with both the astrological and scientific community.

Annual Objectives – (1) Read and review past statistical studies, (2) Do statistical research, (3) Do rigorous mathematical proofs for principles of harmonic astrology, (4) Engage with peers.

Assessment – (1) Several studies read and peer-reviewed, (2) Two papers published in Correlation, a peer-reviewed journal, and a third is in the works, (3) Rigorous mathematical proofs and models for harmonic astrology are in progress, (4) Conferences and Zoom meetings are being attended.

Actions Taken – Continue with current objectives.

Also, at any point in time I can do my own **SWOT** analysis:

Strengths – Good knowledge of Western astrology, statistics, and advanced mathematics

Weaknesses – My skills in the software program R are fair but could be better, and there are always more statistical theories and techniques to master

Opportunities – The Internet has made it much easier to gain knowledge and collaborate with peers around the world, and other scientific disciplines are also discovering astrological effects.

Threats – Many non-astrologers still dismiss astrology out of hand, many of the available large databases are still incomplete, and many of my fellow astrologers still lack the quantitative skills needed to make astrology a recognized scientific discipline

Additionally, the following avenues should probably be pursued:

- **The development of even larger and more complete databases**
- **The inclusion in statistical studies of estimates, when possible, of effect size, statistical power, percentages, and risk-ratio along with a summary of all relevant data and the calculation of statistical significance**
- **A periodic meta-analysis of statistical results**
- **Research collaborations with other astrological organizations and disciplines like chronobiology, heliobiology, mathematics, statistics, computer science, psychology, and astrophysics**
- **Greater emphasis on research and the incorporation of a research methods course into all schools of astrology**
- **Development of an online evidence archive**

Good statistical analysis can help us differentiate between what really works in astrology and what is just a *bubbe meise*, an old wives' tale. Additionally, while statistics can validate that some version of astrology works, a complete understanding of how astrology works may also require new understandings of physics and the relationship between all life forms and our cosmic environment.

And now that we are at the end of this presentation, let me summarize our journey.

- **America's Founding Fathers lived during an astrologically extraordinary time and they did extraordinary things.**
- **Today, we again live in an astrologically extraordinary time.**
- **This is a time of growth for both technology in general and scientific, evidence-based astrology in particular.**
- **There is already an abundance of scientific evidence for astrology that comes from both astrologers and non-astrologers.**
- **Hence, we may be the founding fathers of the next astrological revolution.**

And with regard to that, I'll end this presentation with two final quotes:

MANY PEOPLE AUTOMATICALLY ASSUME THAT I BELIEVE IN ASTROLOGY. THAT'S NOT QUITE TRUE. WHAT I BELIEVE IN IS THE STATISTICAL AND OTHERWISE SCIENTIFIC ANALYSIS OF ASTROLOGY THAT CONFIRMS MUCH OF WHAT TRADITIONAL ASTROLOGERS BELIEVE TO BE TRUE.

-DOC BENTON

**THE FUTURE IS ALREADY HERE. IT'S JUST NOT EVENLY
DISTRIBUTED.**

-WILLIAM GIBSON