

A Cosmic Microwave Background (CMB) fluctuation map, showing temperature variations across the sky. The map is a large, roughly circular area filled with a complex, multi-colored pattern of blue, green, yellow, and orange, representing different temperature fluctuations. A white curved line is drawn across the map, and a small white oval highlights a specific region in the lower right quadrant.

*The*  
**JOURNEY  
SCHOOL**

# Beholding the Reality of God

September 26, 2024



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# Beholding the Reality of God

The Divine Incarnation is the Observable Reality of God

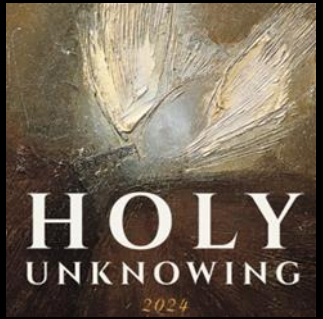
From the Macrocosm to the Microcosm

God is Present if we have Eyes to See

We will immerse ourselves in some of these Divine  
“showings” tonight with the aim of practicing a deep form of  
Self Remembering

# Transcendent Immanence

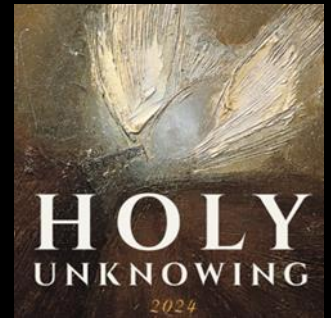
*Whether we look up at the heavens, or down to the subatomic world, the transcendent immanence of God is revealing itself to us in magical, mysterious ways.*



“When we contemplate the wonders of evolutionary history in both its smallest and greatest dimensions, through a microscope or a telescope, what we grasp is a concrete experience of awesomeness that comes as close as may be humanly possible to experiencing **immanent transcendence** or transcendent immanence. Suddenly to see some aspect of creation naked, as it were, in its elemental beauty, its thereness and suchness, stripped of all conventional names and categories and uses, is an experience of transcendence and immanence inextricably joined. This possibility is before us in each and every piece and part of creation: it is the wonder at the world that young children have and that poets and artists retain. It is to experience the ordinary as extraordinary. This is experiencing the world as God’s body, the ordinariness of all bodies contained within and empowered by the divine.”

-Sallie McFague, *The Body of God: An Ecological Theology*, 194-195

# What we will **not** be looking at....



$V(x) = \begin{cases} 0, & x < 0 \\ V_0, & x \geq 0 \end{cases}$ 
 $\sigma_x \sigma_p \geq \frac{\hbar}{2}$ 
 $E = \hbar \nu$ 
 $E = \frac{\hbar^2 k^2}{2m}$

$\Psi_1(x) = \frac{1}{\sqrt{k_1}} (A_{\rightarrow} e^{ik_1 x} + A_{\leftarrow} e^{-ik_1 x}) \quad x < 0$ 
 $\Psi_2(x) = \frac{1}{\sqrt{k_2}} (B_{\rightarrow} e^{ik_2 x} + B_{\leftarrow} e^{-ik_2 x}) \quad x > 0$

$\frac{d}{dt} A(t) = \frac{i}{\hbar} [H, A(t)] + \frac{\partial A(t)}{\partial t}$ 
 $T |j, m\rangle = |T(j, m)\rangle = (-1)^{j-m} |j, -m\rangle$

$i\hbar \frac{\partial}{\partial t} \Psi(r, t) = \hat{H} \Psi(r, t)$ 
 $|\Psi\rangle_{AB} = \sum_{i,j} c_{ij} |i\rangle_A \otimes |j\rangle_B$

$P[a \leq X \leq b] = \int_a^b \int_{-\infty}^{\infty} W(x, p) dp dx$ 
 $H_n(x) = (-1)^n e^{x^2} \frac{d^n}{dx^n} (e^{-x^2})$

$-\frac{\hbar^2}{2m} \frac{d^2 \Psi}{dx^2} = E \Psi$ 
 $\Psi(x) = A e^{ikx} + B e^{-ikx}$ 
 $U(t) = \exp\left(\frac{-iHt}{\hbar}\right)$ 
 $i\hbar \frac{d}{dt} |\Psi(t)\rangle = H |\Psi(t)\rangle$ 
 $A(x) = \exp\left(\frac{1}{\hbar} \int X(t) dt\right)$

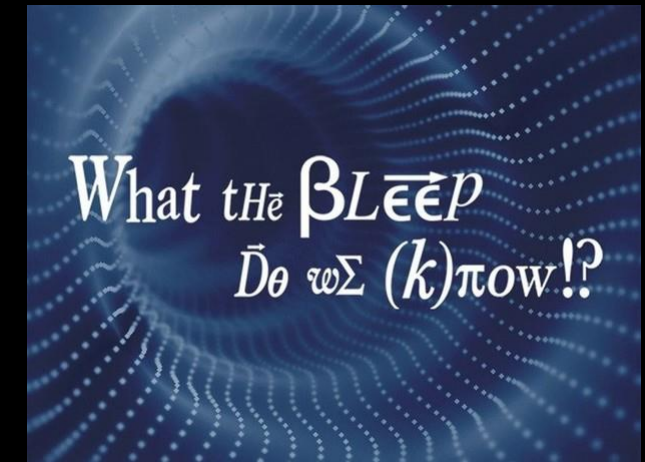
$P(a, b) = \int d\lambda \cdot \rho(\lambda) \cdot p_A(a, \lambda) \cdot p_B(b, \lambda)$

$W \rightarrow \frac{1}{(\pi \hbar)^3} \exp\left[-\alpha^2 \left(x - \frac{pt}{m}\right)^2\right]$

## Quantum Physics

- Wave Particle Theory
- Quantum Entanglement
- Chaos Theory, etc.

## Brain/Mind Science



# What we will explore

## Cosmology

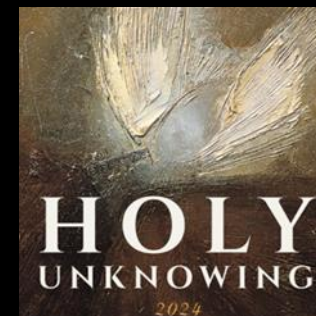
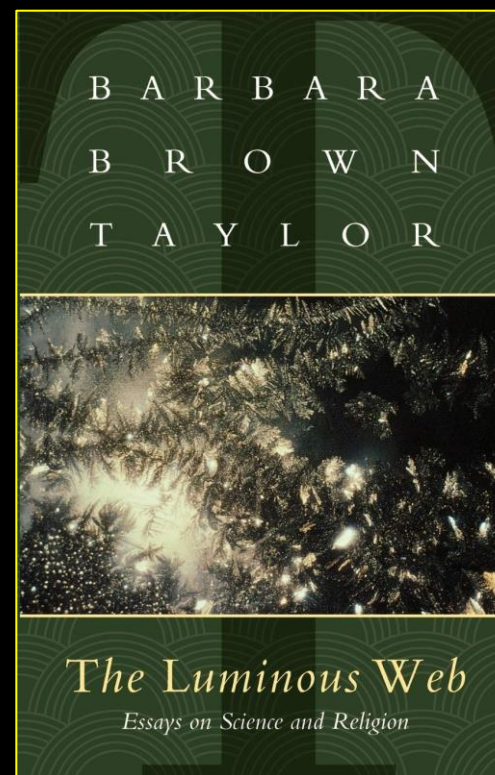
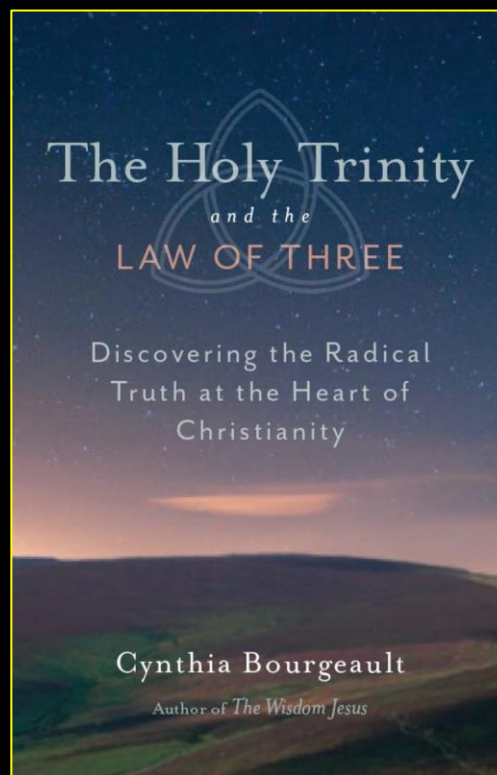
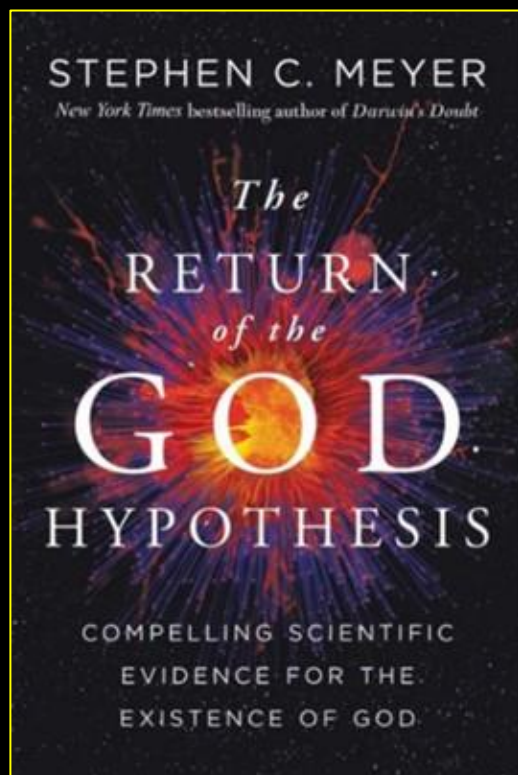
- The Birth of the Universe (aka the Big Bang Theory)
- The Finely Tuned Universe (aka the Goldilocks Universe)

## Biology

- The Origin of DNA
- Evolution & the Fossil Record



# Primary Sources





# The Birth of the Universe



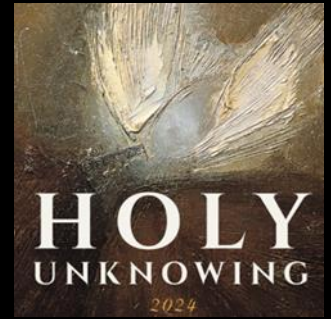
# The Birth of the Universe

How does “the Endless Unity bring  
itself into somethingness?”

*Jacob Boehme, 17<sup>th</sup> Century German mystic*



# In the Beginning....

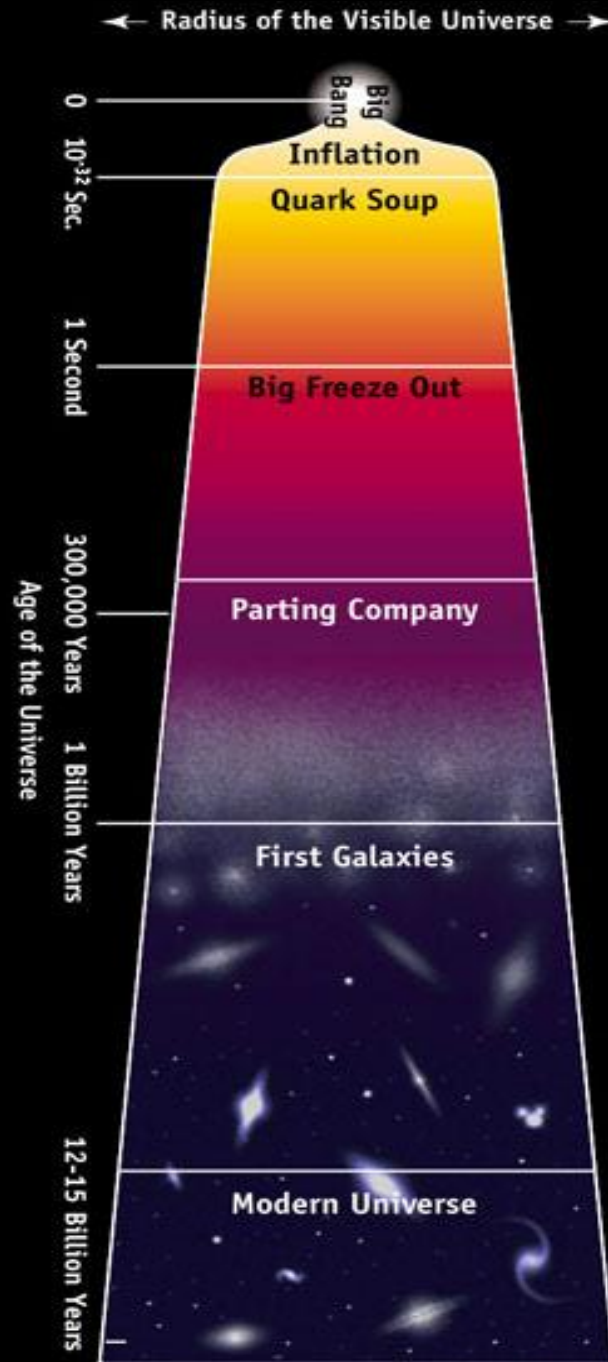


The Big Bang Theory, evidentiary substantiated in the late 20th century, clearly points to a Beginning, when something arose from virtually nothing, as a beginning of the Universe in time, matter and space.

What we know (or think we know.... )

- ❖ **Hubble (1929)** - the universe is expanding as galaxies are moving away from us
- ❖ **Einstein (1918)** realized that if gravity were the only force active in the universe it would necessarily cause matter to congeal and spacetime to contract in on itself. Yet since such a contraction hasn't happened ...Einstein thought some outward pushing force of expansion must be counteracting the effect of gravitation to account for the empty space between massive bodies in the universe
- ❖ **Penzias and Wilson (1965)** discovered faint microwave radiation coming from every direction, afterglow of the Big Bang
- ❖ **Hawkins and Penrose (1965)**, if we trace the universe's expansion back in time we reach a point where all matter and energy would have been immeasurably small, with infinite density & temperature. This is referred to as a **Singularity**.


# Timeline: World Creation & Maintenance



ABSOLUTE	1	do
ALL WORLDS	3	si
ALL SUNS	6	la
SUN	12	sol
ALL PLANETS	24	fa
EARTH	48	mi
MOON	96	re
ABSOLUTE	▼	do

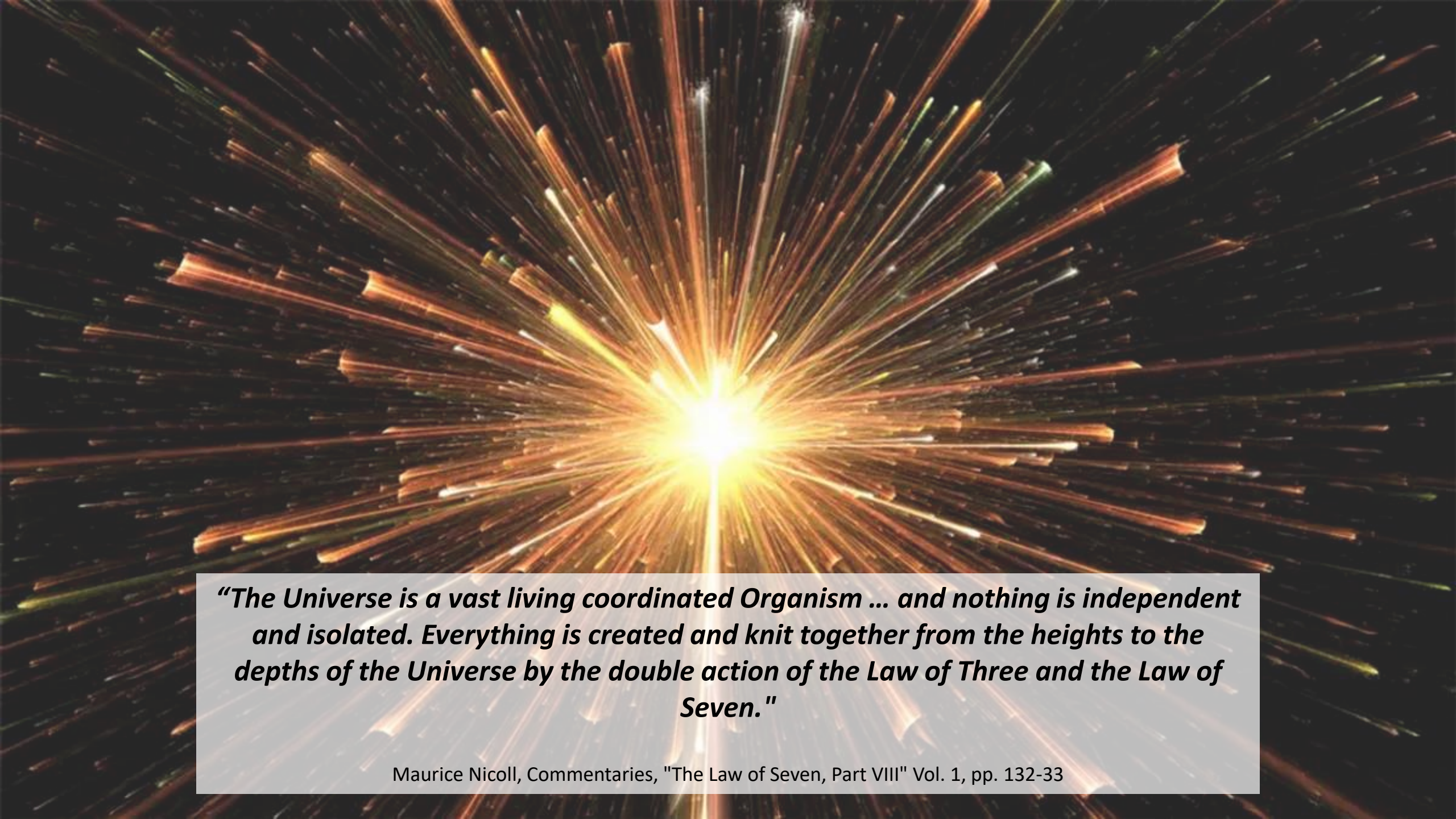
ABSOLUTE	1	do
ALL WORLDS	3	si
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ALL PLANETS	24	fa
EARTH	48	mi
MOON	96	re
ABSOLUTE	▼	do





***“God is the eternal, immense, incomprehensible Unity, which manifests itself in itself from eternity in eternity by the Trinity.”***


Jacob Boehme, The Clavis, p.46



***"The Universe is a vast living coordinated Organism ... and nothing is independent and isolated. Everything is created and knit together from the heights to the depths of the Universe by the double action of the Law of Three and the Law of Seven."***

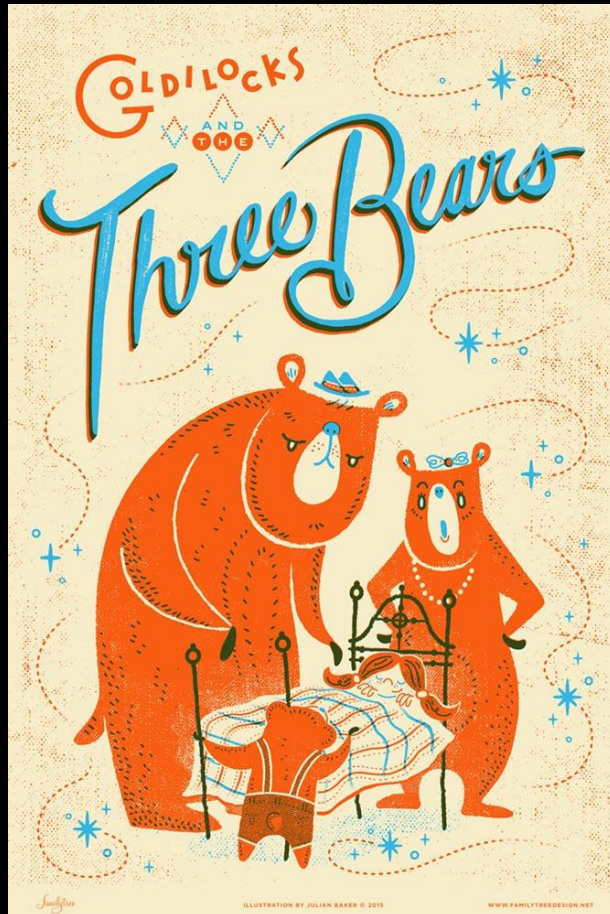
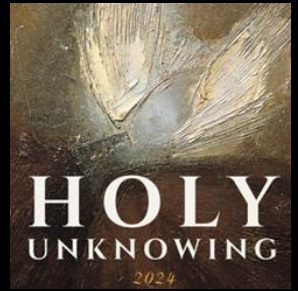
Maurice Nicoll, Commentaries, "The Law of Seven, Part VIII" Vol. 1, pp. 132-33





# The Fine-Tuning of the Universe

# The Idea of a “Goldilocks” Universe

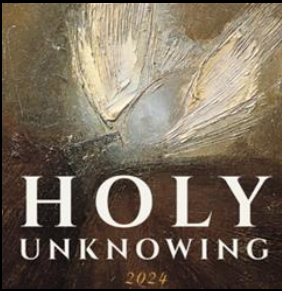


The physical constants of the universe are finely tuned to allow for the existence of life.

The precise values of these constants (e.g., the strength of gravity, the electromagnetic force) are seen as highly improbable and seemingly designed for life to emerge.

“We apparently live in a kind of “Goldilocks universe” where the fundamental forces of physics have **just the right strengths, the contingent properties of the universe have just the right characteristics**, and the initial distribution of matter and energy at the beginning exhibited just the right configuration to make life possible. These facts taken together are so puzzling that physicists have given them a name - “the fine-tuning problem” Meyers





# Examples

- Cosmological Constant
- Electromagnetism
- Strong Nuclear Force
- Weak Nuclear Force
- Mass of a Proton & Electron

"The cosmos is governed by a few key numbers... **These six numbers constitute a 'recipe' for a universe.** Moreover, the outcome is sensitive to their values: if any one of them were to be 'untuned,' there would be no stars and no life."

Just Six Numbers: The Deep Forces That Shape the Universe

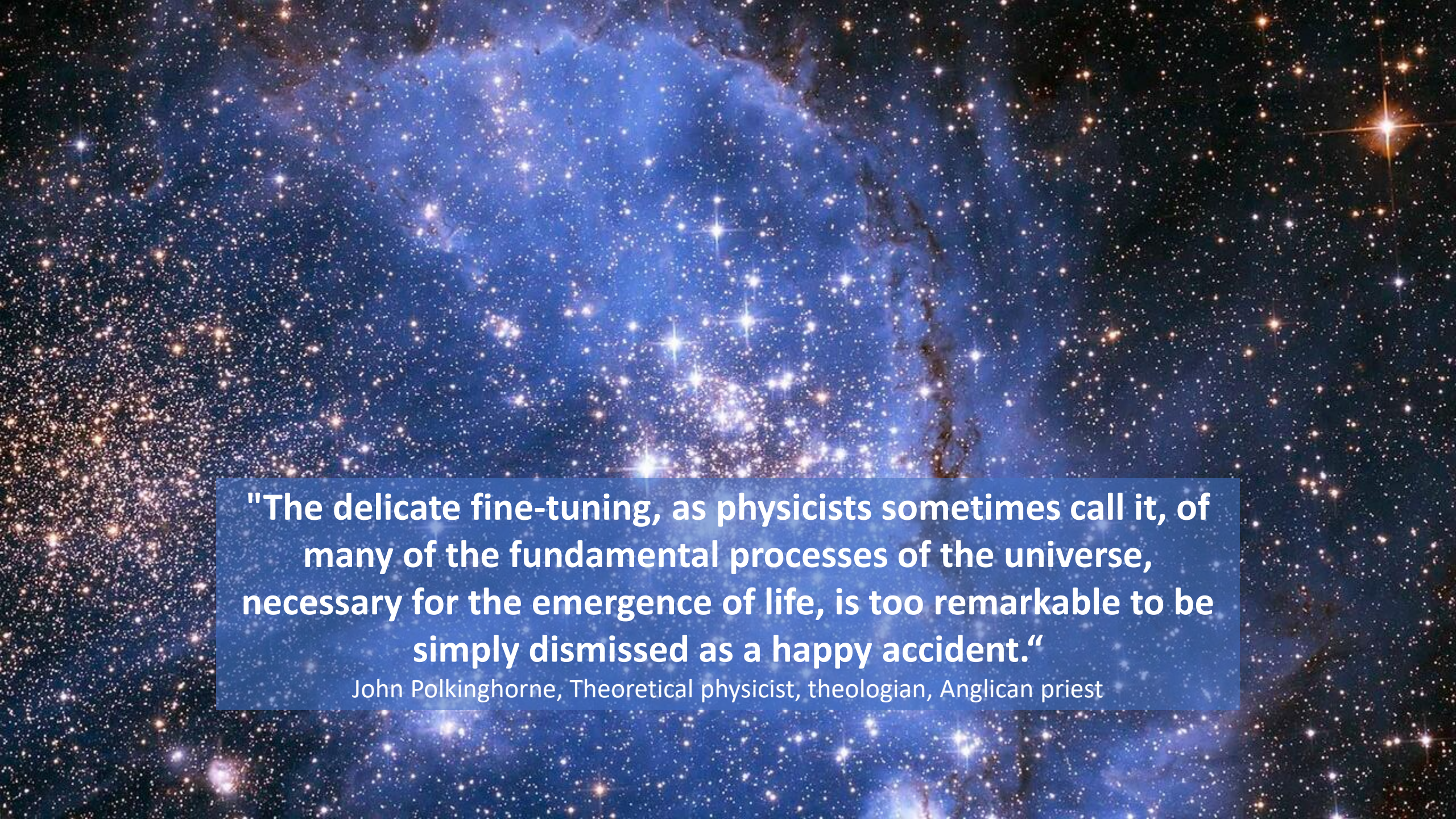
# How Finely Tuned is it?

Looking at just one element – the **Cosmological Constant** (Einstein)

“if gravity is constantly pushing everything in then there must be a force pushing everything out, Einstein called that balance the Cosmological constant. Must be finely tuned to **10 to the 90<sup>th</sup> power** accepted degree of fine tuning.

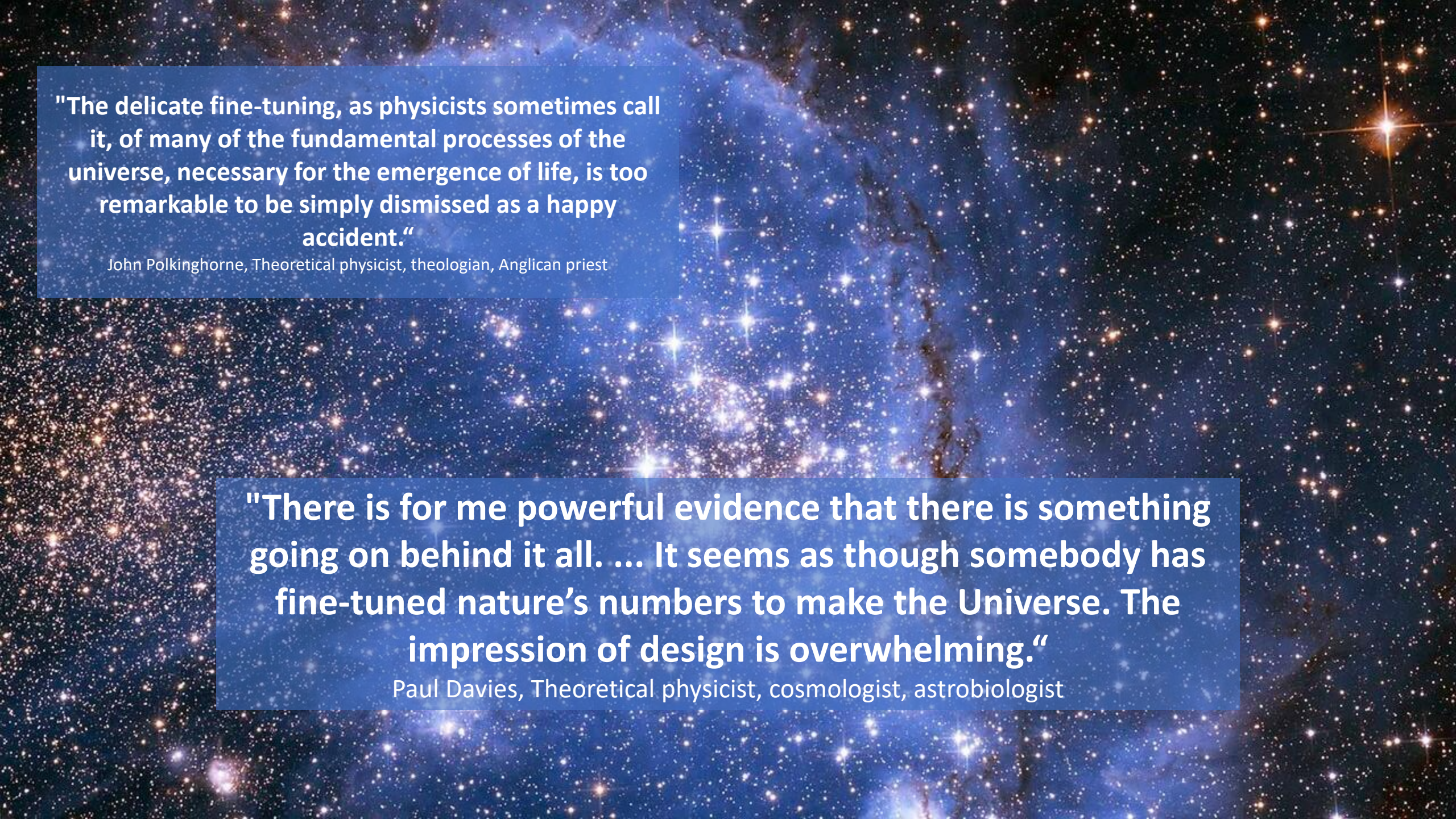
...if it is off in the slightest degree, the universe collapses on itself (gravity stronger) or heat death of the universe where everything dissipates and you cannot have stable galaxies or even basic chemistry....

To put that number in context that would be like to get that degree of fine tuning by chance would be like looking for **one elementary particle**, blindfolded, and not just in our universe but in **10 billion universes our size**...it is an exquisite degree of fine tuning...” Meyers



**"The delicate fine-tuning, as physicists sometimes call it, of many of the fundamental processes of the universe, necessary for the emergence of life, is too remarkable to be simply dismissed as a happy accident."**

John Polkinghorne, Theoretical physicist, theologian, Anglican priest

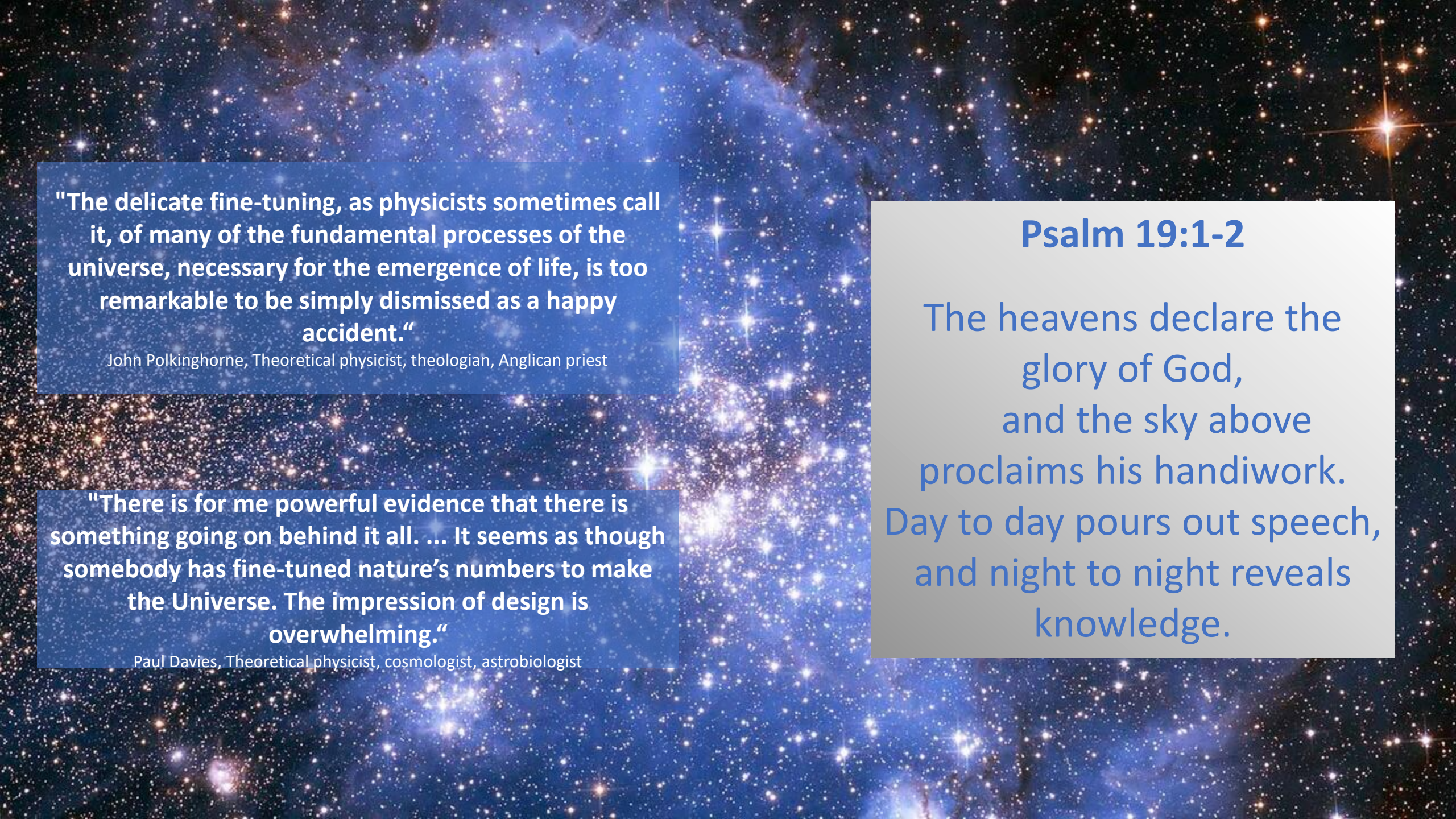


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**"There is for me powerful evidence that there is something going on behind it all. ... It seems as though somebody has fine-tuned nature's numbers to make the Universe. The impression of design is overwhelming."**

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## **Psalm 19:1-2**

The heavens declare the  
glory of God,  
and the sky above  
proclaims his handiwork.  
Day to day pours out speech,  
and night to night reveals  
knowledge.

# The Origin of DNA

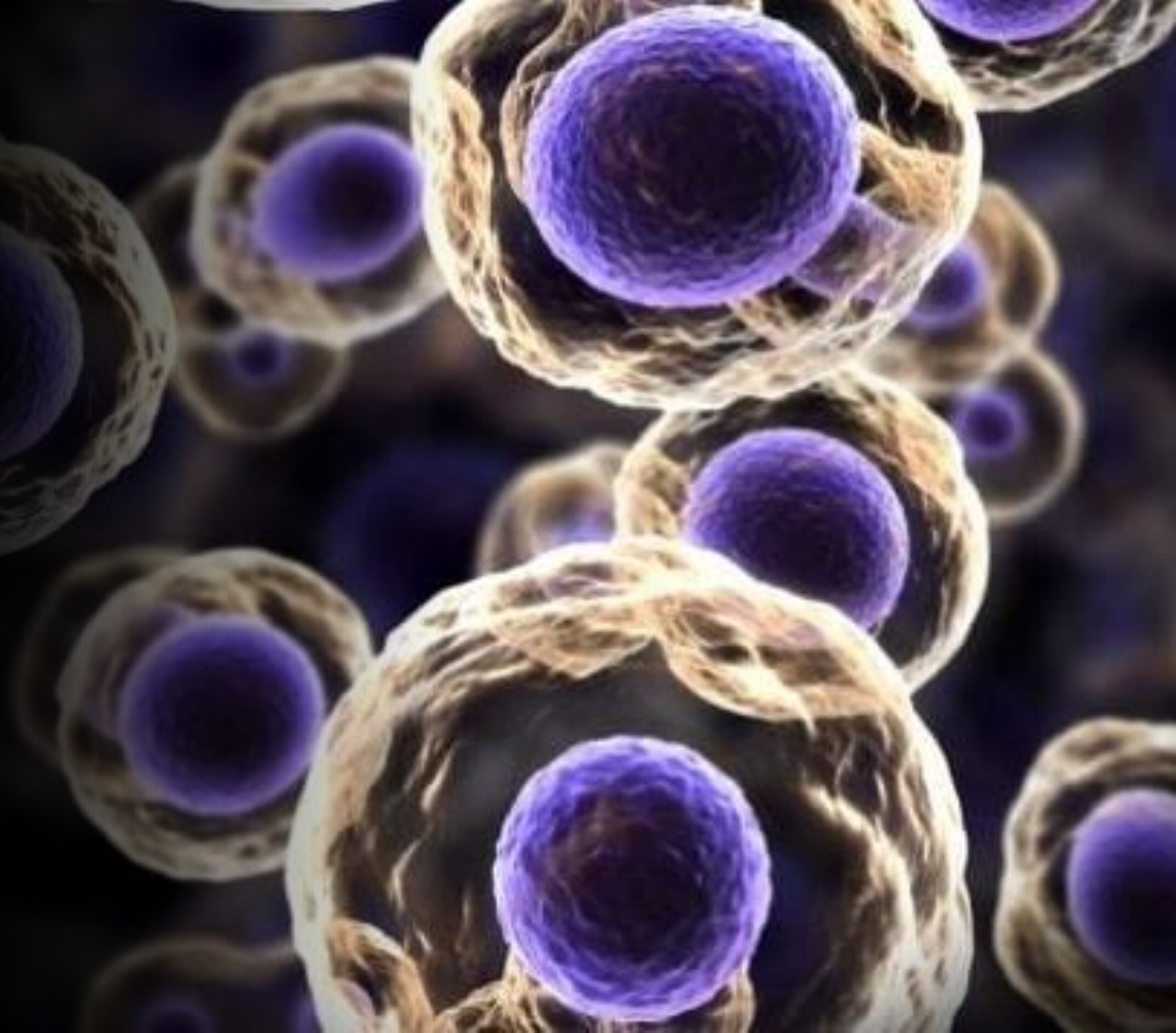
The background of the slide features a view of the Earth from space, showing the blue and white horizon of the planet. A bright sun or star is positioned on the right side, creating a prominent lens flare that radiates across the scene. The overall color palette is dominated by deep blues, whites, and blacks, giving it a cosmic and scientific feel.

How did Life Begin?

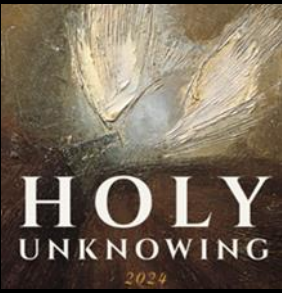


# The Mystery of Arrival of Genetic Information

*“Scientists have become increasingly aware that there is at least one appearance of design in biology that has not been explained by natural selection: the information present in even the simplest of living cells.”* Meyers





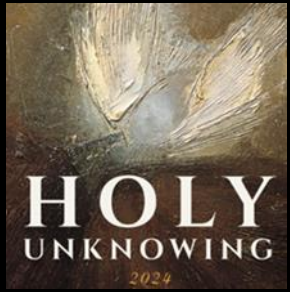


What we know (or think we know) about DNA:

- It is likened to a **blueprint** for life, or a “recipe”
- It is divided into small sections called genes
- It is wondrous in its ability to support growth, repair and reproduction.

It is mysterious how DNA came to be....


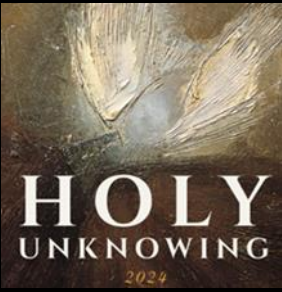
- How did DNA emerge from non-living chemicals?
- DNA is highly complex, compared to information rich computer code, specific sequencing is required
- Does DNA represent another sophisticated, finely tuned system that was designed to support life?



**Wondering...**


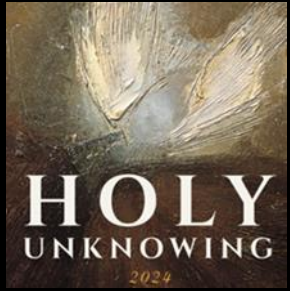
**Could DNA be a key element of a design that was seeded here? Was evolution catalyzed by this marvelous gift to creation?**



A glowing blue DNA double helix structure is shown on the left side of the image, set against a dark background. The helix is composed of numerous small spheres connected by thin lines, creating a three-dimensional effect.

"The complexity of life's foundation—DNA—is, in fact, too great to have been created by Darwin's step-by-step process. The cell uses machinery to read this [DNA] recipe and carry out its instructions, producing the components of life. This process, far from being simple, involves a tightly regulated, highly complex set of interactions. The elegance of the system speaks to design."

— Dr. Michael Behe, biochemist and professor at Lehigh University, Interview with World Magazine, 2005

A glowing blue DNA double helix structure is positioned on the left side of the image, extending from the bottom left towards the top right. The helix is composed of numerous small blue spheres representing nucleotides, connected by thin blue lines representing the sugar-phosphate backbone. The overall appearance is that of a digital or light-based representation of a biological molecule.

"DNA is not just a molecule of life but the **bearer of a cosmic story**. It is the language of life that connects us to the cosmos, where we share in the ongoing creation of the universe.

The complexity of DNA reflects the deep interconnectedness of all life and points to a dynamic, evolving creation that is not static but continually unfolding in patterns of relationship and order."

— Ilia Delio, [The Unbearable Wholeness of Being: God, Evolution, and the Power of Love](#)

**Proverbs 8: 23, 27 - 31**

Ages ago I was set up,  
at the first, before the beginning of the earth.  
When he established the heavens, I was there;  
when he drew a circle on the face of the deep,  
when he made firm the skies above,  
when he established the fountains of the deep,  
when he assigned to the sea its limit,  
so that the waters might not transgress his  
command,  
when he marked out the foundations of the earth,  
then I was beside him, like a master workman,  
and I was daily his delight,  
rejoicing before him always,  
rejoicing in his inhabited world  
and delighting in the children of man.

A fossilized trilobite is shown embedded in a greyish-brown rock matrix. The trilobite's body is clearly visible, showing its characteristic three-lobed structure: a large cephalon (head) on the left, a segmented thorax in the middle, and a segmented pygidium (tail) on the right. The fossil is slightly raised from the rock surface. A semi-transparent white banner is overlaid across the center of the image, containing the title text.

# Evolution & The Fossil Record

# Evolution The Fossil Record

“It is a feature of the known fossil record that most taxa appear abruptly. They are not, as a rule, led up to by a sequence of almost imperceptibly changing forerunners such as Darwin believed should be usual in evolution. ... These peculiarities of the fossil record pose one of the most important theoretical problems in the whole history of life.”

George Gaylord Simpson, Harvard paleontologist



# Evolution & The Fossil Record

- Most Cited Example -

## **The Cambrian Explosion (530 MYA)**

Complex animals suddenly appear in fossil record (arthropods, mollusks, vertebrates)

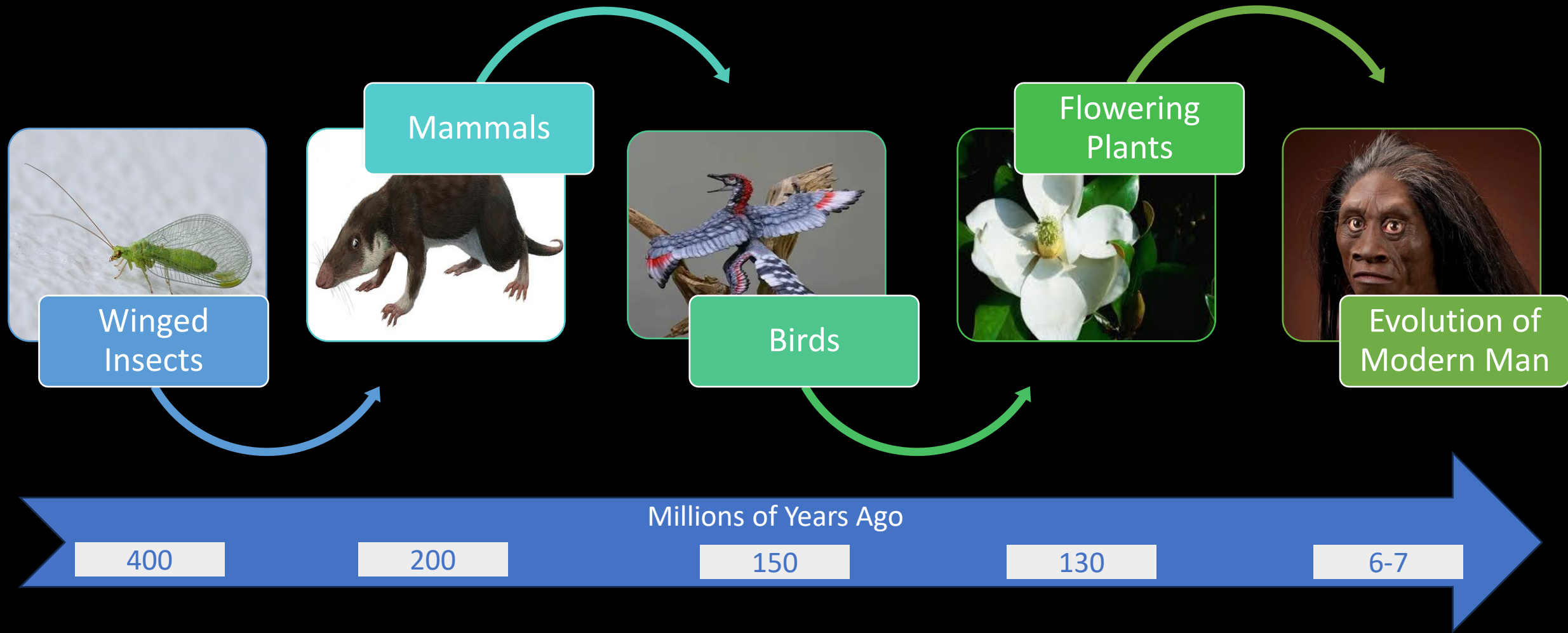
The animals representing most of the body plans that have ever existed on Earth first appear during this explosive event.

13-16 new phyla within 5-6 million years

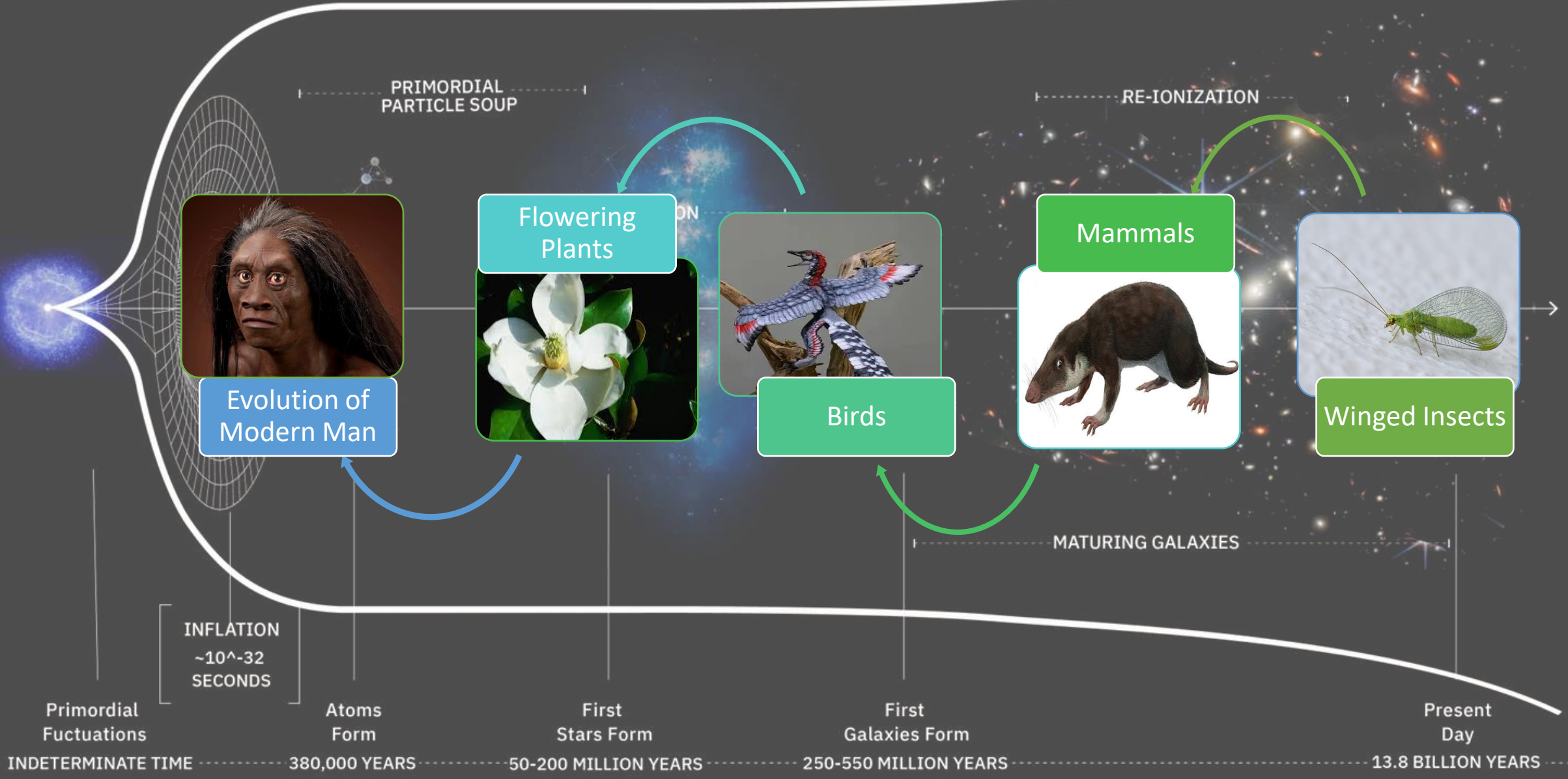




# There have been many other evolutionary explosions:



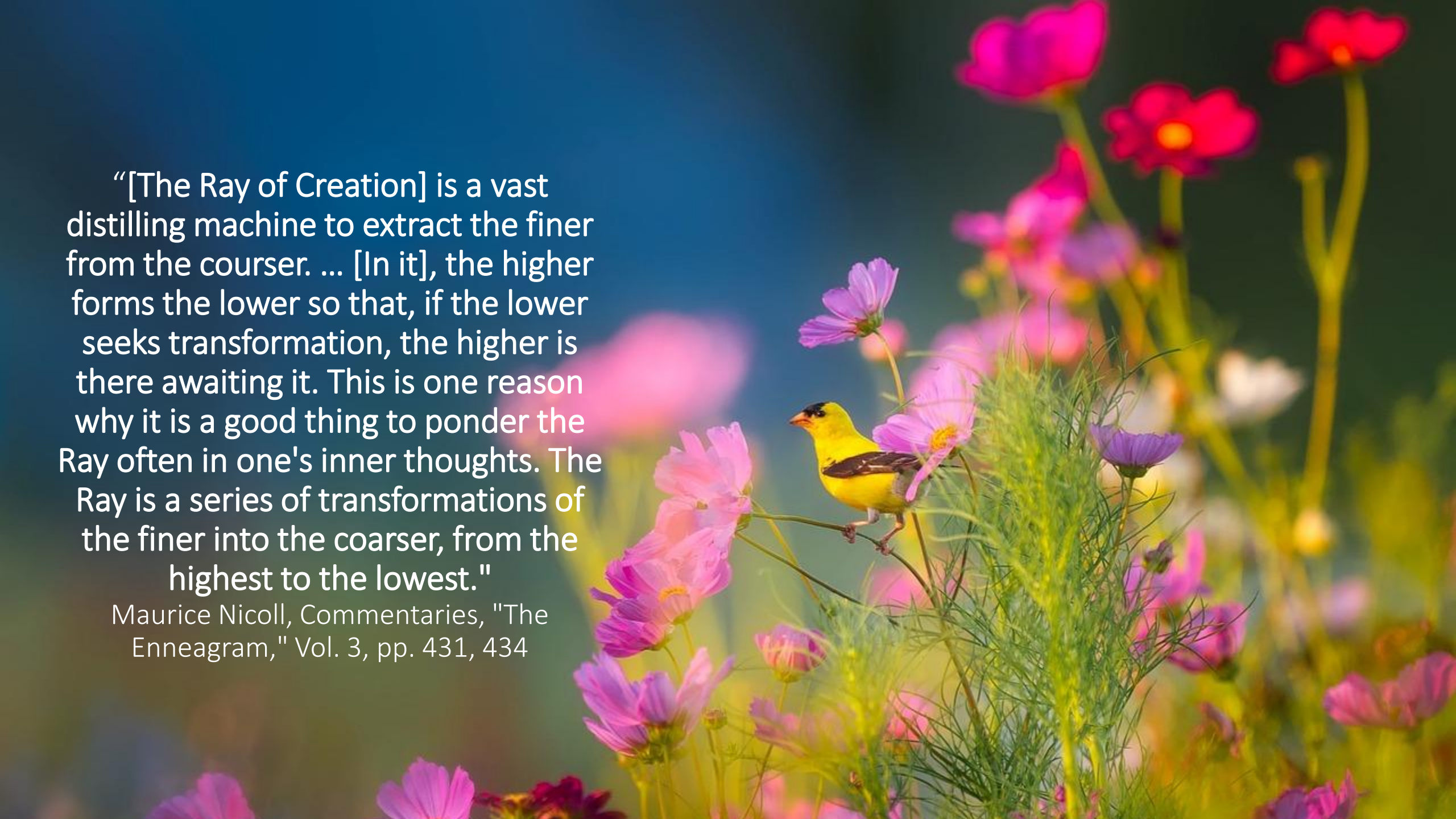
# An Evolutionary "Big Bang"? Our Return to God?



“The immense diversity  
and pluriformity of this  
creation more perfectly  
represents God than  
any one creature alone  
or by itself”

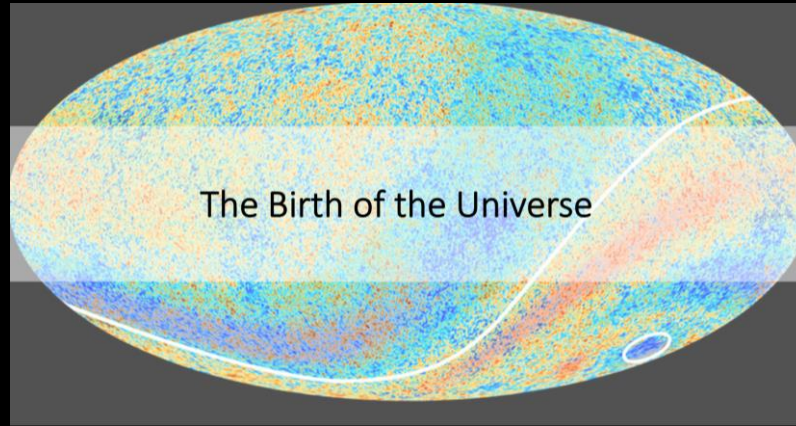
Thomas Aquinas (1224-1274), Summa  
Theologica (47:1)



A vibrant yellow bird with black wings and a black cap is perched on a thin stem of a pink cosmos flower. The bird is facing left. The background is a soft-focus field of numerous pink and purple cosmos flowers under a clear blue sky. The lighting is bright, suggesting a sunny day.

“[The Ray of Creation] is a vast distilling machine to extract the finer from the courser. ... [In it], the higher forms the lower so that, if the lower seeks transformation, the higher is there awaiting it. This is one reason why it is a good thing to ponder the Ray often in one's inner thoughts. The Ray is a series of transformations of the finer into the coarser, from the highest to the lowest.”

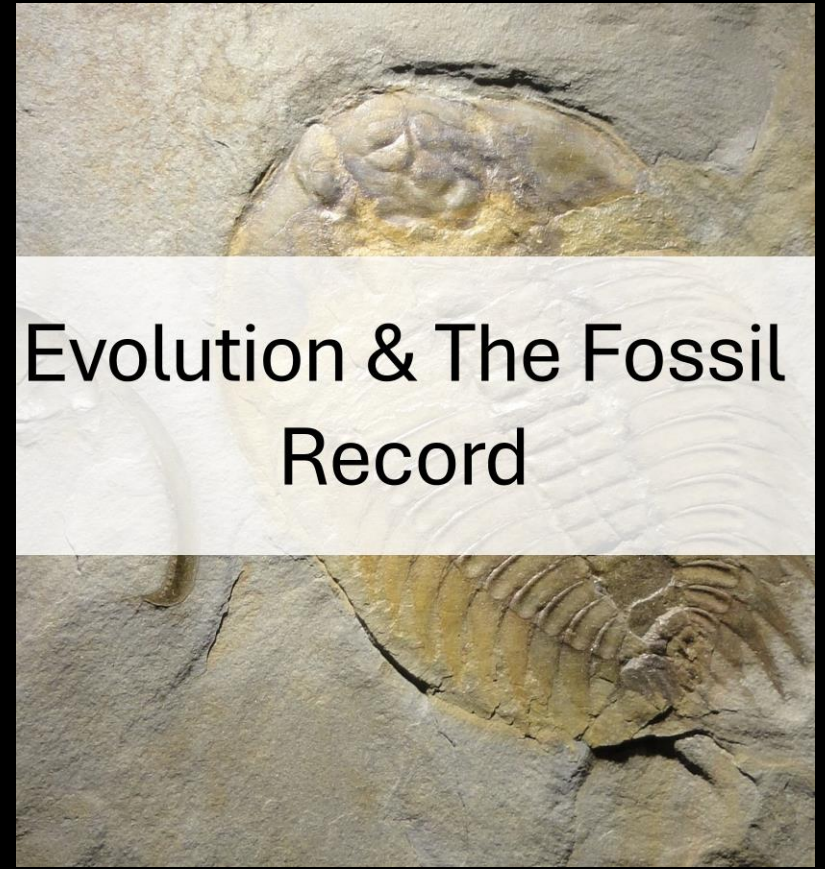
Maurice Nicoll, Commentaries, "The Enneagram," Vol. 3, pp. 431, 434



The Birth of the Universe



The Origin of DNA



Evolution & The Fossil Record



The Fine-Tuning of the Universe

What is the meaning of it all?



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