

$$\Phi^2 = \Phi + 1$$

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Summary

The **golden ratio** (Φ) is the **most consequential number** in existence because of this **one magical property**: $\Phi^2 = \Phi + 1$. We've seen it **across the canon**, woven into **all phenomena**: the stock market, animal kingdom, ancient architecture, media length, and my own thought process. In Paper 12, we saw **the numerical expressions of existence fall out of the exhales of 1,000,000 Python RNG Mersenne Twister**, locking the numerical values of definedness, stability, and complexity to $\Phi = \Omega + \Delta \rightarrow \Phi^2 = \Phi + 1$. Yet, **why *The Equation of Existence* has these values remains unknown... until now... in a moment of discovery that stopped my whole world...**

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Architecture

Okay, dear reader, I want to try something new in this Leaflet because **it is a very special moment for *The Theory of Existence***. I have found something that silently **changes everything we thought we knew**. I want *you* to experience what it feels like to discover it. It's so profound that it's **the only way I want to give it to you**. When I found it, **it didn't come with an explanation**. This Leaflet is devoid of all explanations. Don't bother looking, they're not there. You don't have to understand it right now. I just want you to see it first. We'll talk about it in the May drop. **You just gotta trust me on it...** also, I'm writing the paper, so you don't really have other options, do ya? **Let me tell you a story about my relationship with my good ol' best friend, Phi (Φ), the golden ratio.**

We have all seen that **the golden ratio is one of the most fundamental numbers in the canon** and existence. The first time we met eye to eye was **when I used *The Equation of Existence* to run simulations**. Time after time, the golden ratio popped up across unreasonably diverse phenomena. The golden ratio continued to prove itself **the most fundamental number in *The Theory of Existence***. Let me show you exactly how this unfolded.

Persistence Event = Ω

The die does not change or vary, persisting the previous roll.

5 → 5 → 5

D1: No Change

D2: No Change

The Record Resistance Test

How to Identify Event Types

A → B → C

B - A = **Direction 1**

C - B = **Direction 1**

Extension Event = Δ

The die repeats the previous direction, extending that direction further.

2 → 3 → 5

D1: Positive

D2: Positive

Resistance Event = Φ

The die change direction, resisting the previous direction.

1 → 5 → 3

D1: Positive

D2: Negative

***The Equation of Existence* came first, numberless and unitless. *The Equation* is not a measure of a phenomenon.** Definedness, stability, and complexity are names for the patterns in which existence behaves. It captures the pattern of existence generating those phenomena, not the phenomena themselves. I wasn't looking for numerical expressions. Then... **something occurred in Paper 12 in *The Dice Experiment* that changed everything.**

The Dice Experiment involved repeatedly rolling various dice and tracking how one roll affects the next. I created a metric called ***The Record Resistance Test***. It worked across **quantum, hand-rolled, and Python random number generator (RNG)** dice and passed the manipulation check. There are **three possible event types** that could occur from one roll to the next: **persistence, resistance, and extension** events. I ran **1,000,000 die rolls using**

the Python RNG: Mersenne Twister, the most rigorous RNG—which passed the Diehard battery, the TestU01 suite, and the NIST Statistical Test Suite—and calculated *The Record* Resistance scores. The outcome was: **Extension** = 18.54%, **Persistence** = 30.51%, and **Resistance** = 50.85%. **I thought... wait a second... is that...?**

I spotted the golden ratio in the proportions, which led me to discover **the most beautiful mathematical system I've ever seen**. It uses all three percentages and is **locked perfectly into golden-ratio proportions**. Here it is:

$$\Delta + \Omega + \Phi = 100\% \qquad \frac{\Omega}{\Delta} = \varphi \qquad \frac{\Phi}{\Omega} = \varphi \qquad \frac{\Phi}{\Delta} = \varphi^2$$

The system comprises **three terms** that account for 100% of the mathematical framework. The ratios of the three terms **lock into the golden patio proportions**. There is only **one exact arithmetic solution, and it is...**

$$\begin{aligned} \Delta &= 19.10\% & \Omega &= 30.902\% & \Phi &= 50.00\% \\ \Delta + \Omega + \Phi &= 19.10\% + 30.90\% + 50.00\% = 100\% \\ \frac{\Omega}{\Delta} &= \frac{30.90\%}{19.10\%} = \varphi & \frac{\Phi}{\Omega} &= \frac{50.00\%}{30.90\%} = \varphi & \frac{\Phi}{\Delta} &= \frac{50.00\%}{19.10\%} = \varphi^2 \end{aligned}$$

had two conceptual models: 1) **The Theory** framework vs 2) **the randomness null model**. I compared both **against the empirical model** generated from **1,000,000 die rolls** using the Python RNG. Here is what came out:

Event Type	Randomness	<i>The Theory</i>	Empirical	Ratios
Resistance	33.33%	50.00%	50.85%	Definedness (Φ^2)
Persistence	33.33%	30.90%	30.57%	Stability (Φ)
Extension	33.33%	19.10%	18.58%	Complexity (1)
Cramer's V	.013	.283	22x Better Fit Than Randomness	

***The Dice Experiment* Numerical Expression Derivation**

The Theory decimated the randomness model, which means I pulled **the Theory's** mathematical framework out of total randomness. This **mathematical system** is where the numerical expressions of existence originate, but **the Dice Experiment** empirically validated these numerical expressions, showing that the event type/direction from one die roll to the next **locks into these ratios because they are the three ways existence behaves**:

$$\text{Resistance} = \frac{\text{Persistence}}{\text{Exstension}} \rightarrow \text{Definedness} = \frac{\text{Stability}}{\text{Complexity}} \rightarrow \Phi = \frac{\Omega}{\Delta}$$

These numerical expressions of **The Equation of Existence** enabled an unprecedented ability to find the arrangements of these three behaviors with mechanical precision... so I did just that. **I used those numerical expressions to map out three forms of The Equation of Existence**, revealing the equations for **1) what existence IS, 2) what existence DOES, and 3) the self-justified, self-contained tautology**. It unlocked the whole framework...

Except... I've been missing only one thing: **what's the connection between The Equation of Existence and its numerical expressions, that is, the golden ratio?** Why does **The Equation** use those numerical expressions? Why not any other number? So... dear reader, I'll leave you with one of the most profound discoveries in the canon ...and, with all the love, trust, and respect I have for you, **give you the moment that you deserve to remember...**

First Principles

$\Delta = \text{Complexity}$

The degree to which phenomena escalate from basic to structured forms.

$\Omega = \text{Stability}$

The degree to which complexity is attracted to complexity.

$\Phi = \text{Definedness}$

The degree to which something exists.

The Pattern Stacking View

$$RP_{n-1} + RP_n$$

$$0 + 1 = 1$$

$$1 + 1 = 2$$

$$2 + 1 = 3$$

$$3 + 2 = 5$$

$$5 + 3 = 8$$

$$8 + 5 = 13$$

$$13 + 8 = 21$$

The Equation Stacking View

$$RP_{n-1} + RP_n$$

$$0 + 1 = 1$$

$$1 + 1 = 2$$

$$2 + 1 = 3$$

$$3 + 2 = 5$$

$$5 + 3 = 8$$

$$8 + 5 = 13$$

$$13 + 8 = 21$$

Numerical Expressions

What Existence *IS*

$$\Phi = \Omega + \Delta \rightarrow \varphi^2 = \varphi + 1$$

What Existence *DOES*

$$\Phi = \Omega / \Delta \rightarrow \varphi = \varphi / 1$$

Existence = Existence

$$\Phi = \Omega \rightarrow \Phi = \Phi \rightarrow \varphi = \varphi$$

The Pattern Sequence View $\frac{2}{1} \rightarrow \frac{3}{2} \rightarrow \frac{5}{3} \rightarrow \frac{8}{5} \rightarrow \frac{13}{8} \rightarrow \frac{21}{13} \rightarrow \Phi = \sim 1.618$

The Equation Sequence View $\frac{2}{1} \rightarrow \frac{3}{2} \rightarrow \frac{5}{3} \rightarrow \frac{8}{5} \rightarrow \frac{13}{8} \rightarrow \frac{21}{13} = \Phi = \frac{\Omega}{\Delta} \rightarrow \varphi = \frac{\varphi}{1} \rightarrow \varphi = \varphi$

Start with 0 and 1 \rightarrow The Equation of Existence Self-Emerges \rightarrow Existence = Existence

The Mathematical Inevitability of *The Equation of Existence*