The Creation Function and Fibonacci: Beyond 99.9% Correlation

An investigation into harmonic growth, Fibonacci numbers, and what four Monte Carlo experiments reveal about their mathematical relationship.

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An Unexpected Mathematical Correspondence

For nearly twenty years, I have described an interesting relationship between the Creation Function (CF) and the Fibonacci sequence: eleven consecutive growth intervals generated by the Creation Function correspond remarkably closely to Fibonacci numbers.

I have traditionally characterized this relationship as a **99.9% correlation**.

That statement is mathematically justified, but it is not the complete story.

A strong correlation tells us that two sets of numbers follow similar patterns. It does not tell us whether the resemblance is unusual, whether it has a deeper mathematical explanation, or whether other growth sequences could produce comparable results.

To investigate those questions, I developed four Monte Carlo experiments that compare the Creation Function's Fibonacci correspondence against alternative mathematical growth models.

The results are revealing. Some alternatives rarely reproduce the observed agreement. Small perturbations of the Creation Function, however, frequently preserve it. And certain ordinary geometric sequences can reproduce Fibonacci numbers with exceptional precision.

Rather than diminishing the original discovery, these experiments help establish what the correspondence actually means, where its limitations lie, and which questions deserve further investigation.

1. What Is the Creation Function?

The Creation Function originated in 2005 from my investigation of mathematical patterns inspired by the Genesis creation account.

What first made the Creation Function compelling to me was its apparent relationship to the Periodic Table of the Elements. I observed correspondences between the early rotations of its spiral and patterns associated with the first four periods of the Periodic Table, followed by apparent relationships to nuclear shell closures—including the magic numbers 50 and 82, which are relevant to neutron-capture nucleosynthesis. In my interpretation of Genesis, these observations suggested a principle I call **Creation Sufficiency**: that God provided the elements needed for each successive stage of Creation. Those proposed connections are discussed elsewhere on my website, and references are provided in the appendix; they are the motivation for this inquiry, not evidence established by the Fibonacci tests in this article.

This led me to recognize three distinct aspects worth investigating: the **apparent chemical and nuclear growth pattern**, the **mathematically established exponential growth** generated by harmonic threshold crossings, and a **third, finite-range resemblance to Fibonacci numbers**. It is that third comparison that we examine here.

The mathematical construction uses the harmonic series, a well-known sequence formed by repeatedly adding the reciprocal of each successive positive integer:

$$H_n = \sum_{k=1}^{n} 1/k$$

Although the harmonic series increases without bound, it does so very slowly. Its partial sums grow approximately as the natural logarithm. The Creation Function records the integer positions at which these accumulating sums first reach successive half-integer thresholds: 1, 1.5, 2, 2.5, 3, 3.5, and so on.

In my mathematical construction, these thresholds correspond symbolically to the day/night divisions of the Genesis creation pattern. The scriptural interpretation motivated the chosen half-integer schedule; it does not mathematically require that schedule or establish its scientific applications.

The resulting threshold-crossing indices begin:

1, 2, 4, 7, 11, 19, 31, 51, 83, 137, 227, 373, 616, ...

This mathematical foundation of the Creation Function is related to previously documented harmonic-series threshold sequences. OEIS A004080 records crossings at whole-number thresholds, while OEIS A226161 records crossings at half-integer thresholds using a strict inequality. The Creation Function uses a greater-than-or-equal-to condition, which produces a slightly different sequence at exact threshold crossings.

Notice that the distances between successive indices increase. The important distinction is that the individual harmonic terms become progressively smaller, while the number of terms required to advance the accumulating sum by another half-unit becomes progressively larger. This creates an expanding sequence of intervals. In my paper, *On Threshold Crossing Indices of the Harmonic Series at Half-Integer Levels*, I formally define these crossings and establish their asymptotic growth behavior.

The crossing indices increase approximately exponentially:

$$\tau(i/2) \sim exp(i/2 - \gamma)$$

Here γ is the Euler–Mascheroni constant. The ratio of successive crossing indices approaches $\sqrt{e} \approx 1.648721$. This is an established mathematical consequence of the harmonic threshold construction, not an empirical curve-fitting result. But something interesting happens when we examine the intervals themselves.

2. Eleven Intervals That Resemble Fibonacci Numbers

The Fibonacci sequence begins with 1 and 1. Each subsequent number is the sum of the preceding two:

1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...

Fibonacci numbers are especially familiar because of their appearances in mathematical descriptions of natural arrangements, including spiral counts in sunflower seed heads and pinecones. Now compare eleven successive gaps between the Creation Function's half-integer threshold crossings with corresponding Fibonacci numbers.

Position	CF interval	Fibonacci	CF – Fibonacci
1	1	1	0
2	2	2	0
3	3	3	0
4	4	5	-1
5	8	8	0

6	12	13	-1
7	20	21	-1
8	32	34	-2
9	54	55	-1
10	90	89	+1
11	146	144	+2

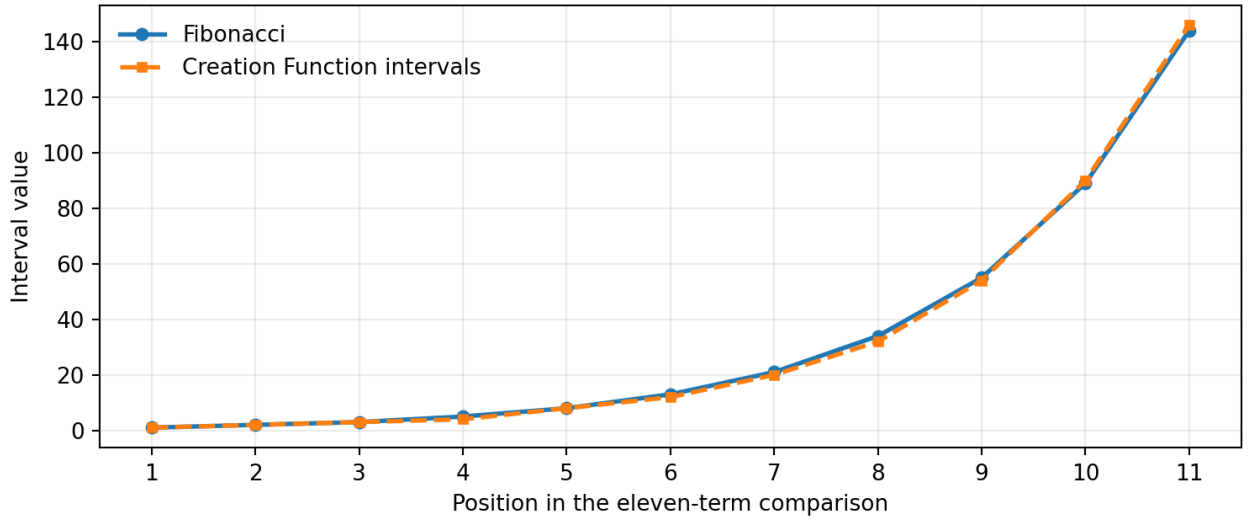


Figure 1. Eleven position-matched CF intervals and Fibonacci numbers. The unusually close curves also share an increasing trend, so further testing is needed.

Across all eleven comparisons, the **total absolute difference is just 9**. Four values match exactly. No individual value differs by more than two units. The first eleven CF intervals in this comparison span values from 1 through 146, yet their correspondence with the Fibonacci progression remains remarkably close. This is the numerical observation that originally attracted my attention.

The question is how to interpret it.

3. What Does a 99.9% Correlation Mean?

Using the eleven paired values, the recalculated Pearson correlation coefficient is r = 0.99982873.

Squaring that value gives R^2 = 0.99965748.

Expressed as a percentage: **99.9657%**.

This is the coefficient of determination for an ordinary least-squares linear regression with an intercept. It confirms the exceptionally strong linear association I have described for many years. The best-fitting regression equation, using Fibonacci numbers to predict the corresponding CF intervals, is approximately:

$$CF\ interval\ =\ 1.015278\ \times\ Fibonacci\ -\ 0.793561$$

There is also a more restrictive comparison. Instead of fitting the best line, we can ask how closely the CF values agree directly with their corresponding Fibonacci values. Using the direct differences without fitting a slope or intercept gives an agreement measure equivalent to R^2 = 0.99939291, or **99.9393%**. Both calculations confirm the very close numerical relationship. However, these percentages should not be misunderstood.

An R^2 of 0.999657 does not mean that there is a 99.9657% probability that the relationship is physically meaningful. Nor does it mean the sequences are identical or that chance has been eliminated.

Two increasing sequences can exhibit an extremely high correlation simply because they follow similar exponential growth trends. To understand whether the observed resemblance is exceptional, we must compare it against reasonable mathematical alternatives. That is the purpose of the Monte Carlo experiments.

4. Going Beyond Correlation: Monte Carlo Testing

A Monte Carlo experiment uses repeated computer-generated simulations to investigate how often a specified result occurs under a particular mathematical model. Imagine generating 200,000 alternative growth sequences. For each sequence, we measure how closely its intervals agree with Fibonacci numbers.

We then ask: **How many of these alternative sequences perform at least as well as the actual Creation Function?**

If comparable results occur frequently, the observed correspondence is not particularly unusual under that model. If comparable results are rare, the correspondence is statistically unusual under the assumptions of that model. This does not prove that the Creation Function has a special physical role. It identifies how its numerical behavior compares with the alternatives being tested.

How the correspondence was scored

Two measurements were used:

Total distance, S: For every generated interval, calculate its absolute distance from the nearest Fibonacci number in the eleven-number comparison set. Add those distances together. Smaller values indicate closer agreement.

Exact matches, H: Count how many generated intervals equal a Fibonacci number in that comparison set. Larger values indicate more exact matches.

The observed Creation Function scores are S = 9 and H = 4.

A simulated sequence was considered to match or exceed the observed combined performance when $S \leq 9$ and $H \geq 4$. The fraction of simulations meeting both conditions is the **joint Monte Carlo p-value**, denoted pJ.

Each of the four experiments used 200,000 simulated sequences.

Importantly, the scoring method matches each interval to its nearest Fibonacci number, not necessarily the Fibonacci number at the same position. This distinction becomes particularly significant in the fourth experiment.

5. Four Tests, Four Different Questions

The experiments were designed to investigate different explanations for the CF–Fibonacci relationship.

Test	Joint p-value	Percent	Question
N1	0.000270	0.027%	Independent exponential noise
N2	0.357400	35.740%	Local ±1 landmark changes
N3	0.000800	0.080%	Smooth correlated

			growth
N4	0.043760	4.376%	Variable geometric rate/scale

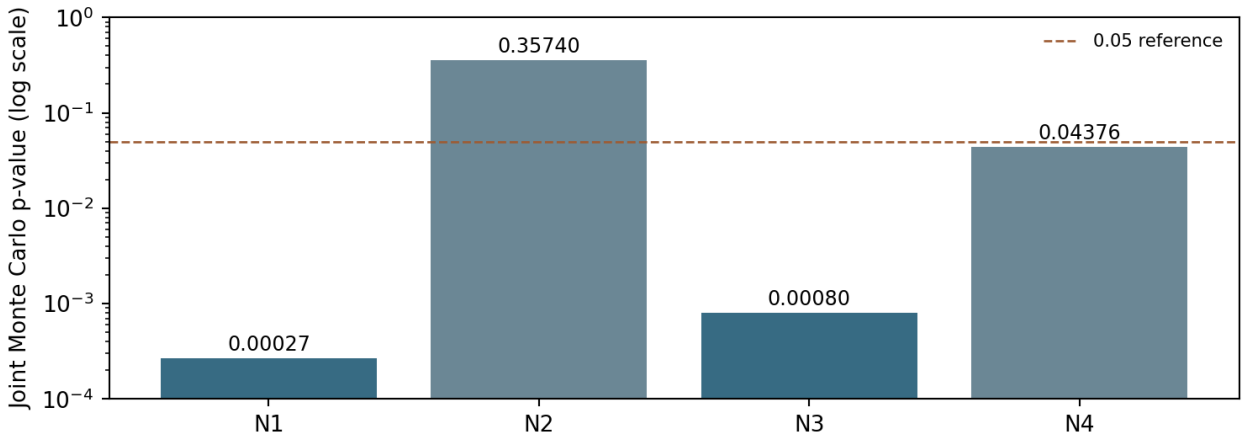


Figure 2. Joint Monte Carlo p-values on a logarithmic axis. The dashed line shows the conventional 0.05 reference level; the tests are distinct and exploratory.

These values should not be averaged or combined into a single confidence figure. Each experiment asks a different question.

N1 — Is the correspondence unusual among noisy exponential sequences?

The first null model begins with an exponential growth curve fitted to the logarithms of the CF crossing indices. Random deviations are independently introduced at each crossing position. The generated values are then converted into increasing integer sequences, and their gaps are compared with Fibonacci numbers. Of the 200,000 simulations, only 54 achieved the required joint score.

Joint p-value: 0.000270.

That means just 0.027% of the simulated sequences matched or exceeded the observed combination of closeness and exact matches.

Interpretation: The CF–Fibonacci correspondence is statistically unusual under this particular independent-noise exponential model.

N2 — How sensitive is the correspondence to small changes?

The second experiment asks a different question. Instead of generating entirely new growth sequences, it begins with the original CF crossing indices and perturbs each by a randomly selected integer of −1, 0, or +1. The resulting landmarks are adjusted where necessary to remain strictly increasing. Their intervals are then scored against Fibonacci numbers.

Joint p-value: 0.357400.

Approximately 35.74% of these nearby alternatives perform at least as well as the original CF sequence. At first glance, this might appear disappointing because the result is not statistically significant at the conventional 5% threshold. But N2 is primarily a sensitivity experiment. It shows that the observed correspondence is not dependent on every CF landmark remaining at precisely its original integer value.

Interpretation: Comparable Fibonacci proximity is common within the local perturbation neighborhood tested. This suggests tolerance to small numerical changes, although it does not establish biological robustness or prove that CF is uniquely suited to natural growth.

N3 — What if the alternative growth sequences are smooth?

The third experiment recognizes that natural growth processes do not necessarily fluctuate independently at every step. Successive deviations may be correlated, producing smoother changes. N3 therefore generates exponential-growth sequences with correlated logarithmic residuals. The adjacent residual correlation parameter was set to ρ = 0.8. This produces alternatives whose deviations tend to persist across adjacent positions rather than fluctuate completely independently.

Joint p-value: 0.000800.

Only 0.08% of the simulated sequences met the observed joint criterion. The median total-distance score among N3 simulations was 49, compared with the CF's score of 9.

Interpretation: The CF correspondence remains statistically unusual under this particular smooth-growth model. N3 strengthens the observation that the N1 result was not solely a consequence of assuming independent random fluctuations. However, the conclusion remains conditional on the selected correlation structure and other modeling assumptions.

N4 — Could ordinary geometric growth produce the same correspondence?

The fourth experiment is particularly important.

N4 generates sequences using a simple geometric-growth equation:

$$n_{\mathrm{m}} = \lfloor exp(A' + B'm) \rfloor$$

The parameters controlling starting scale and growth rate vary among simulations. Unlike N1 and N3, N4 does not add random deviations independently at each landmark. Each simulated sequence follows its own deterministic geometric progression, subject to integer conversion and monotonicity requirements.

Joint p-value: 0.043760.

Approximately 4.376% of the simulated geometric sequences matched or exceeded the observed CF scores. This meets the conventional 5% significance threshold under the specified N4 sampling distribution, although only narrowly. But the experiment revealed something even more informative. One simulated geometric sequence produced the intervals:

1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89

Every one of those values belongs to the Fibonacci sequence. Under the nearest-Fibonacci scoring method, this alternative achieved S = 0 and H = 11: a perfect score. The sequence is shifted relative to the position-by-position Fibonacci comparison used for the original correlation calculation. Consequently, its perfect result applies to Fibonacci-number membership, not to the same eleven position-matched targets. Nevertheless, the result demonstrates that an ordinary geometric progression, combined with integer rounding, can reproduce Fibonacci-number membership extremely well.

Interpretation: CF's Fibonacci correspondence is not unique. Some simple geometric sequences can match Fibonacci numbers equally well or better under the chosen scoring rule. This is a meaningful alternative explanation that must be considered.

6. Why Do CF and Fibonacci Resemble Each Other?

There is a mathematical reason these sequences can display similar behavior. The Fibonacci sequence approaches a characteristic growth ratio known as the golden ratio: $\phi = (1 + \sqrt{5})/2 \approx 1.618034$.

The CF half-integer harmonic threshold crossings have the asymptotic growth ratio $\sqrt{e} \approx 1.648721$. These ratios differ by approximately 1.90%, relative to the golden ratio. Both therefore describe sequences that grow geometrically at relatively similar rates. This offers a plausible mathematical explanation for why the two sequences can remain close over a finite interval. But the two growth factors are not identical. Because $\sqrt{e} > \phi$, the CF intervals eventually grow faster than corresponding Fibonacci terms, in a relative sense. Thus, the correspondence cannot remain proportionally close indefinitely.

We can already see the beginning of a larger absolute divergence by extending the original comparison one position: the next CF interval is 243, while the corresponding Fibonacci value is 233, a difference of +10. The original eleven-position comparison has a maximum absolute difference of two. At the next position, that difference becomes ten. This does not invalidate the original correspondence. It identifies its finite-range character.

The remaining mathematical question is how much of that close finite-range agreement follows naturally from the similar growth factors and how much depends on the specific harmonic threshold construction.

7. What Does This Have to Do With Growth in Nature?

Fibonacci numbers appear frequently in the mathematical description of arrangements found in plants. For example, sunflower seed heads often display two intersecting families of spirals whose counts are Fibonacci numbers. But real biological systems are not always mathematically exact.

A 2016 study by Jonathan Swinton, Erinma Ochu, and their collaborators examined 657 sunflower heads. Among 768 reliably evaluated spiral-family counts, 565 were Fibonacci numbers. Another 67 displayed other predefined Fibonacci structures. The researchers also documented non-Fibonacci arrangements, including values close to Fibonacci numbers. This is significant because natural structures can exhibit strong mathematical regularities while allowing variation.

An interesting numerical comparison emerges from the sunflower observations reported by Swinton and colleagues. Their study found prominent spiral counts at Fibonacci values including 21, 34, 55, and 89, with observed counts extending to approximately 144. These values overlap the upper portion of the eleven-term Creation Function comparison, where CF intervals of 20, 32, 54, 90, and 146 correspond closely to Fibonacci numbers 21, 34, 55, 89, and 144. Beyond the eleventh term, the departure increases significantly. Notably, the researchers identified 54 as the most frequently observed individual non-Fibonacci spiral count—a value that also appears in the CF interval sequence.

Although this numerical overlap is intriguing, it does not establish that the Creation Function governs sunflower development or that the observed range marks a biological limit of the correspondence. Rather, it provides an example of how natural structures can exhibit both exact and approximate Fibonacci relationships.

The Creation Function's finite-range Fibonacci correspondence raises a related question: might harmonic threshold growth belong to a broader family of mathematical patterns capable of producing Fibonacci-like relationships? That is a reasonable question for investigation. However, a numerical resemblance between CF intervals and Fibonacci numbers does not establish that the Creation Function controls sunflower development, pinecone geometry, or any other biological process. To demonstrate such a relationship, a CF-based model would need to make independently testable predictions about measurable natural structures. For now, the biological examples provide useful mathematical context rather than direct physical validation.

8. What Have We Actually Learned?

The four experiments produce a more informative conclusion than the original correlation statistic alone.

First, the numerical resemblance is genuine. The eleven CF intervals closely track their corresponding Fibonacci values, yielding an exceptionally high linear correlation.

Second, that resemblance is statistically unusual under some alternatives. N1 and N3 produce very low Monte Carlo p-values under their respective exponential-growth assumptions.

Third, the correspondence tolerates small changes. N2 shows that nearby variations of the CF landmarks frequently retain comparable Fibonacci proximity.

Fourth, geometric growth provides a competing explanation. N4 demonstrates that other sequences with similar growth characteristics can produce excellent or even perfect Fibonacci-set correspondence.

These findings are compatible. The fact that the Creation Function shares properties with other mathematical growth sequences does not make those properties disappear. It does, however, limit any claim that CF uniquely generates Fibonacci-like behavior. The strongest conclusion supported by these experiments is that **the Creation Function exhibits an exceptionally close finite-range numerical correspondence with Fibonacci numbers, whose statistical distinctiveness depends on the alternative growth model used for comparison.** That is more precise than simply reporting a 99.9% correlation.

9. Remaining Questions and Future Tests

The present investigation is exploratory. The Fibonacci correspondence was identified before the Monte Carlo models were developed, and the model choices and scoring conventions were not established through an independent preregistration process. Consequently, the reported p-values should be regarded as conditional exploratory measurements rather than confirmatory probabilities.

Several useful questions remain:

One is whether the observed advantage persists when each generated interval is compared only with the Fibonacci number at the corresponding position, rather than its nearest Fibonacci-number target.

Another is whether CF provides a closer finite-range approximation than geometric alternatives constrained to use the theoretically established growth factor $\sqrt{e}$.

A third question concerns the selection of the comparison interval itself. How does the agreement change when additional terms are included, and how often do alternative sequences produce an equally favorable interval after allowing the comparison window to vary?

Also, without establishing the “sufficiency argument” mentioned at the beginning, the Creation Function loses significance and therefore its correlations to the Fibonacci sequence become less interesting.

These questions offer practical opportunities for further testing. They also illustrate an important scientific principle: a mathematical hypothesis becomes more informative when we attempt to identify the circumstances under which it might fail.

10. Conclusion: Beyond “99.9%”

When I first recognized the correspondence between the Creation Function and Fibonacci numbers, the extraordinarily high correlation was compelling, and it remains an interesting observation. But a correlation coefficient, however impressive, is not a complete scientific explanation. The subsequent Monte Carlo investigations have revealed a richer mathematical picture. The CF correspondence is rare under certain

alternatives, locally tolerant of small changes, and also reproducible by some ordinary geometric-growth sequences.

The Creation Function and Fibonacci sequence share a fundamental characteristic: both exhibit approximately exponential growth, although their asymptotic growth factors are different. Their close agreement over the investigated finite interval deserves explanation, but the available evidence does not yet establish a unique relationship or a physical growth mechanism. For me, the value of this investigation is not limited to whether a particular statistical threshold was passed. It is that a mathematical observation I have studied for many years can now be examined through explicit, reproducible tests capable of challenging its interpretation.

The Creation Function's Fibonacci correspondence began as a discovery. It has now become a testable mathematical research question.

Technical Appendix: Methods and Reproducibility

The calculations were conducted using Python and NumPy.

Observed data

CF crossing indices: [1, 2, 4, 7, 11, 19, 31, 51, 83, 137, 227, 373]

CF intervals: [1, 2, 3, 4, 8, 12, 20, 32, 54, 90, 146]

Fibonacci targets: [1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144]

Observed nearest-target scores: S = 9, H = 4.

Simulation settings

Simulations per null model: 200,000. NumPy random seed: 12345.

Fitted logarithmic growth parameters: A = −0.2889304609; B = 0.5241796703; σ = 0.1074062555.

N1 uses independent normally distributed logarithmic residuals around the fitted growth curve.

N2 independently perturbs the original landmarks by integer values drawn uniformly from {−1, 0, +1}.

N3 uses correlated logarithmic residuals following a stationary first-order autoregressive process with ρ = 0.8.

N4 varies the geometric starting scale and growth rate using uniform distributions centered on the fitted parameters, with half-widths of 0.25 for A and 0.05 for B.

Generated crossing indices are converted to integers using the floor function, clipped to a minimum of one, and adjusted where necessary to enforce strict monotonicity.

Statistical definitions

For simulated intervals d_i and the Fibonacci target set F, the total distance S sums each interval's distance from its nearest value in F; H counts the number (#) of zero distances. The joint Monte Carlo p-value is the proportion satisfying S ≤ 9 and H ≥ 4. No adjustment for exploratory model selection or multiple comparisons was incorporated into these reported values.

$$S = \Sigma_i \, min(f \in F) \, |d_i - f|$$

$$H = \#\{i : min(f \in F) \, |d_i - f| = 0\}$$

References and Supporting Resources

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CreationFunction.com — Background discussion and interactive Creation Function resources.