Entropy Collapse: Hidden Cybersecurity Threats of High-Energy Computation on Financial, Quantum, and Biological Systems

For humanity and the continuation of the earth & life itself.

January Walker

Cyberthreat Landscape

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Abstract:

There is no cybersecurity risk greater than the risk to life itself. If there is no life, there is no threat to protect it from. At a glance Bitcoin appears to be a financial theory. In looking deeper it's a one-way entropy machine that threatens human health, environmental health, the bees, cybersecurity systems, financial systems, and now the nation itself with the Bitcoin reserve. This disclosure highlights real & time sensitive cybersecurity threats that can be backed up with proven mathematics.

Thermodynamic Pollution of Entropy & Electromagnetism in Bitcoin and Cryptocurrencies

In quantum physics and thermodynamic systems-theory we are beginning to recognize that pollution is not limited to visible smog or CO_2 metrics and expand into electromagnetic field pollution & entropy pollution. Cryptocurrency Systems like Bitcoin's architecture are producing both at scale— pulling structured order from the physical world and converting it into irreversible biologically disruptive waves.

As our understanding of quantum thermodynamics grows, we can no longer afford to treat this kind of pollution as theoretical. It is measurable, it is intensifying, and its consequences are already present in both environmental and biological as it is directly causing the acceleration of cancer in the population.

Humanity may not have known before that it's information & computational systems were imprecise and that it was causing death at scale. That is forgivable if we take immediate action to correct the imprecision

for the health and survival of humanity. The course we are on is not inevitable and with new understanding of technology we can change the course we are on. This is not to say that crypto systems must be eliminated completely. Instead it is proposed that we deploy mathematically precise alternatives that do not cause this level of biological disruption & decommission them replacing them with energy precise alternatives that follow the rules of physics.

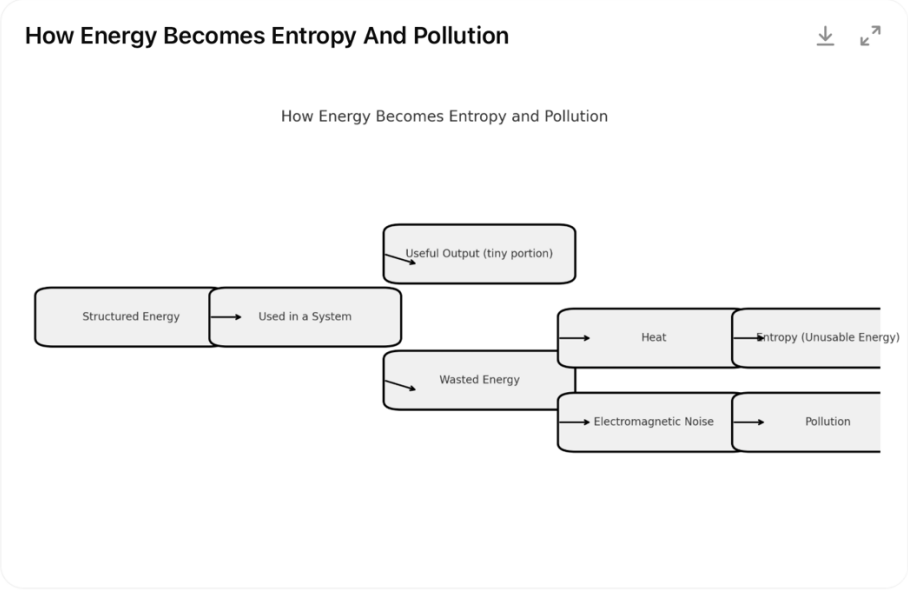
Environmental Effects of Thermodynamic Pollution

The Planet Runs on Bounded Energy. The Earth is not an infinite system. It operates within tightly bounded energy, thermal, and informational limits. While life is adaptable, the biosphere is fundamentally governed by laws of thermodynamics, electromagnetic regulation, and coherence thresholds. **Just as there is a maximum level of CO_2 the atmosphere can tolerate before climate systems destabilize, there is also a maximum level of entropy and electromagnetic disorder that Earth's living systems can absorb before collapse begins.**

Earth receives a relatively fixed input of energy from the sun—about **173,000 terawatts** continuously. Only a small portion of that is captured by living systems (photosynthesis), atmospheric dynamics (climate), and biospheric regulation (food chains, oxygen cycling).

What this means is the Earth operates on **a closed energy budget**—every joule of energy we use artificially must be released, absorbed, or neutralized within this same system. When systems like Bitcoin mining, data centers, and artificial computation inject high-energy waste (heat, entropy, electromagnetic fields) into this closed loop, **they consume energy without returning structure**.

This is the definition of **entropy pollution**.



In nature the system is opposite of how we are using energy artificially today. Instead it is structed that useful output is maximized and wasted energy is minimized.

Biological energy follows a **natural logarithmic**:

$$r(\theta) = ae^{b\theta}$$

This form appears in **galaxies, hurricanes, DNA, and mitochondria** and it models energy-efficient growth, self-similarity, and continuous evolution—*life*.

In modeling Bitcoin's energy behavior, the opposite is true. **It expands inefficiently** and eventually plateaus. This mathematical equation can be captured by modifying the logarithmic into a **finite log** (basic algebra)**:**

$$r(\theta) = \log(\theta + 1)$$

This equation curve grows fast, then flattens—just like Bitcoin's energy curve. It encodes **finite energy limits**, **non-reversible computation**, and **entropy saturation**.

Feature	Bitcoin Spiral $\log(\theta + 1)$	Biological Spiral $ae^{b\theta}$
Growth Rate	Logarithmic (slows down)	Exponential (accelerates)
Energy Efficiency	Decreasing	Increasing or stable
Entropy Accumulation	High	Low
Finality / Ceiling	Yes (bounded)	No (unbounded)
System Type	Collapsing	Life-sustaining

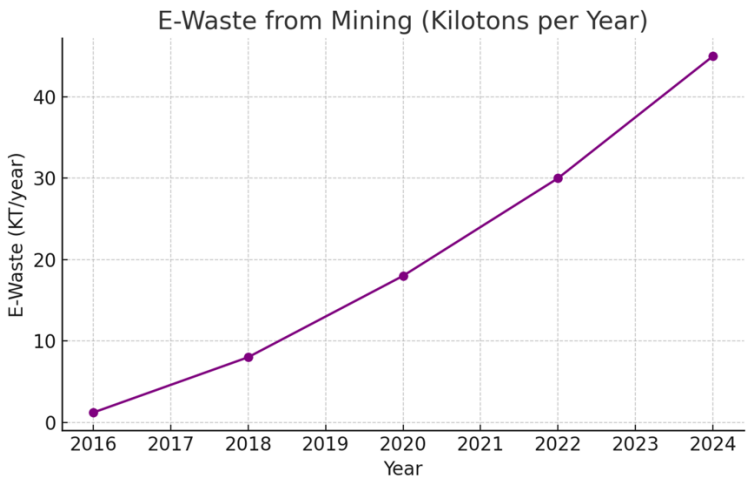
Entropy is often misunderstood as "just disorder." But in physical terms, **entropy is energy that has lost its ability to do useful work**. Once it becomes diffused heat, scattered, or background radiation, it cannot be recycled back into a structured form **without an external intervention**.

In natural systems, life regulates entropy through:

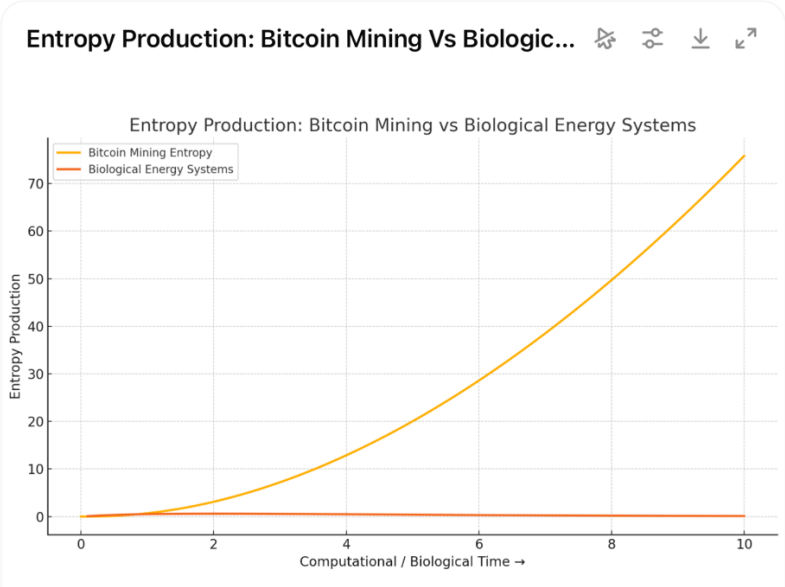
- **Energy cycling** (e.g. food webs, ATP loops),
- **Phase feedback** (seasonal rhythms, cell repair),
- **Field containment** (electromagnetic shielding in cells and atmosphere).

But these systems have **thresholds**. A forest can only absorb so much CO_2 before it begins to die. The atmosphere can only handle so much thermal energy before climate destabilizes. The electromagnetic environment can only handle so much high-frequency noise before biological signaling breaks down. **We are rapidly approaching the limit.**

A visualization of energy used in mining comparted to entropy production.

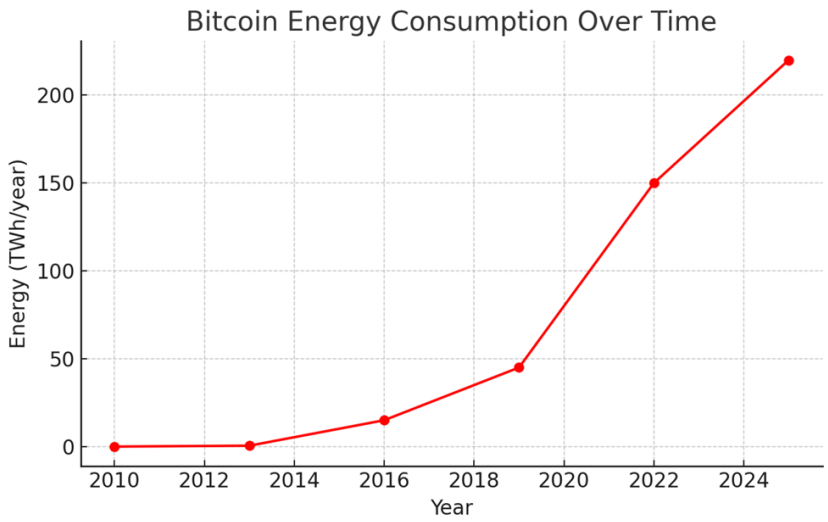


Here is a visual comparison of entropy production:

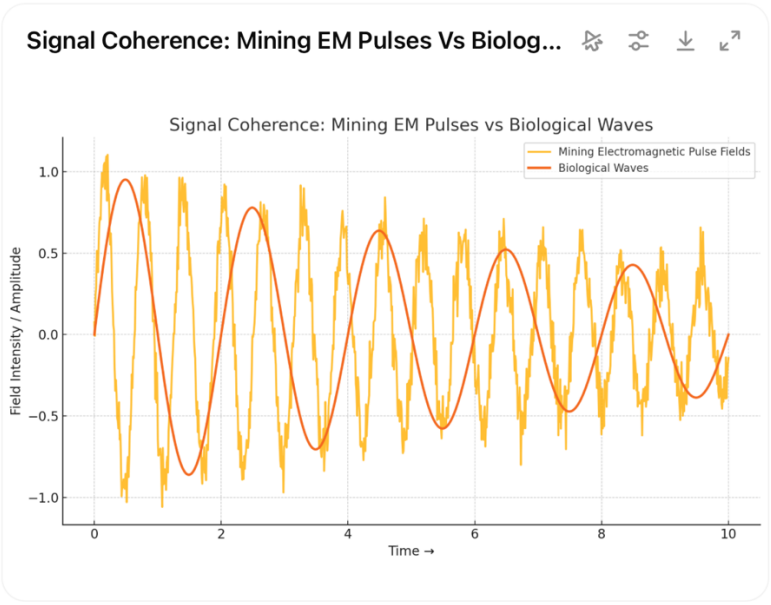


- **Bitcoin Mining Entropy** (yellow): Grows sharply, showing accelerating disorder as computational effort scales.
- **Biological Waves** (orange): Shows a graceful, declining curve—indicating biological systems are optimized for *low-entropy*, efficient energy use.

As you can see the energy usage is following the entropy production. This indicates that the energy model is broken.



Biology functions with quantum communication and there are biologically compatible frequencies. Elector



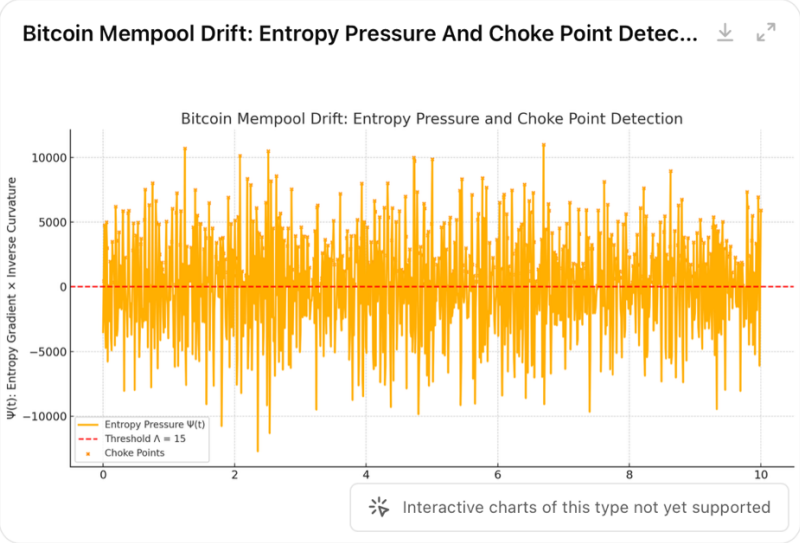
This diagram contrasts:

- **Mining Electromagnetic Pulse Fields** – chaotic, jagged, noisy patterns that decay unevenly and create environmental stress.
- **Biological Waves** – coherent, harmonic, and smoothly decaying—supporting stability and rhythm in living systems.

It's a clear signal-level visualization of **destructive noise vs life-sustaining order**.

Entropy

This chart provides evidence that **Bitcoin—similar to other cryptocurrencies is not operating in a thermodynamic equilibrium**—and that its entropy footprint is a **real-time, measurable security risk**. Its entropy pressure is unbound and often accelerates in direct response to activity, rather than stabilizing with volume. In physics, this would be equivalent to a reactor vessel generating more thermal pressure the longer it runs, without any containment logic to bleed off the excess. Eventually, this results in critical failure.



Bitcoin should never be above the red line. If it is, it is violating the foundational laws of information physics—and the cost is being paid in atmospheric stability, computational coherence, and human biological health.

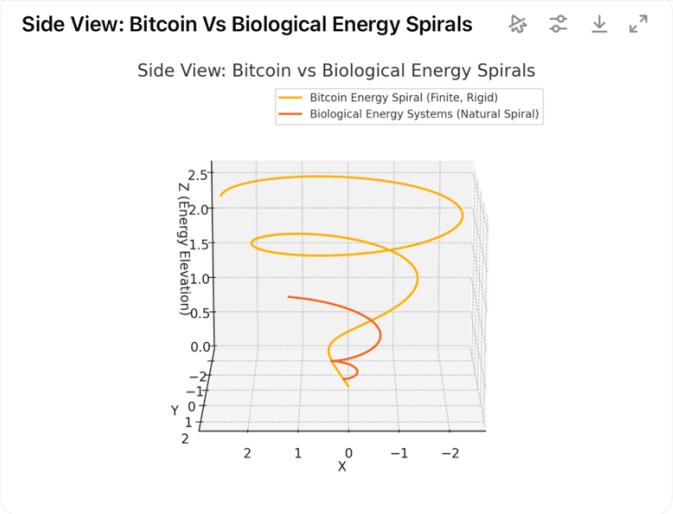
Electromagnetism

Bitcoin mining and data infrastructure produce high-frequency electromagnetic fields that are both powerful and unpatterned**.** They do not match any natural field signature. Instead of supporting biological rhythm, they inject random, incoherent frequency bursts into the body's operating range.

This is quantum-level pollution.

Unlike CO_2 or heat, **EM interference attacks the body's signaling infrastructure directly**. It does not accumulate like a toxin. It **overwrites**, **jams**, and **fractures** communication between cells in real time.

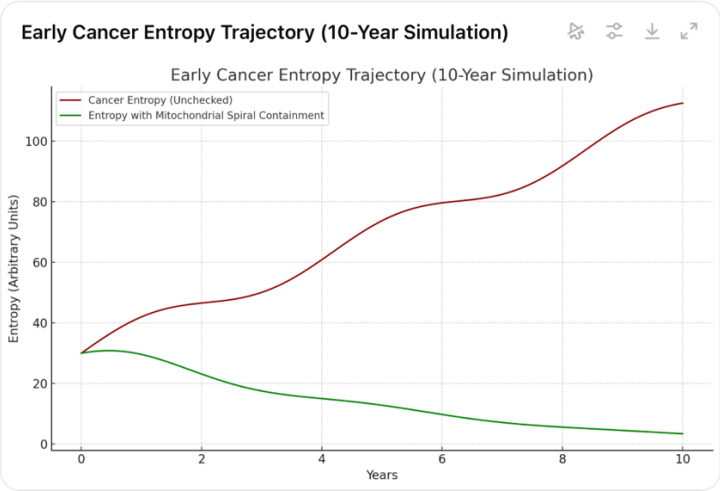
And when that happens, the body enters a state of **field disorganization**. It can no longer tell which cells are self, which are foreign, or which are damaged. This is how cancer begins—not always with a mutation, but with **a loss of biofield coherence**.



We are beginning to understand that **the body does not communicate purely through chemistry**—it relies on **quantum coherence**, **frequency harmonics**, and **field-based signaling** to regulate every system, from DNA repair to immune response. Cells, neurons, mitochondria, and water molecules all operate within a tightly tuned **frequency architecture**—a biological spectrum of **electromagnetic resonance**, typically between **0.5 Hz and 150 Hz**, depending on the tissue and state of activity.

This system is not metaphorical—it is **physically real and experimentally verifiable**.

Cancer is not just a genetic mutation. It is a electromagnetic-level communication failure & humans are quantum beings (as evidence of us existing in 4-dimensions)



There is a limit to how much electromagnetic activity the Earth—and the human body—can contain before field-level collapse begins.

We have limits for:

- Carbon in the air,
- Degrees of warming,
- Parts per million of pollutants.

We now need to understand that there is one for **electromagnetism**. Because once the balance is tipped, no chemical intervention will restore what was lost.

Bitcoin's Core Equation Proof-of-Work for Entropy & Electromagnetism. Bitcoin mining requires energy to solve computational puzzles.

The total energy E used per block is $E = H \cdot e$

Where:

H = network hashrate (hashes per second)
e = energy cost per hash (Joules/hash)

Bitcoin adjusts the difficulty every 2016 blocks to **ensure constant block time (~10 mins)**, meaning **as more miners compete, total energy always increases**. It started wide and became smaller and smaller like a misshapen golden spiral.

Entropy Production Function

Every hash attempt is a thermodynamic action. It consumes energy and produces **waste heat**—non-recoverable entropy.

$$\Delta S = \frac{Q}{T}$$

Where:

Q = E (heat energy from mining)
T = ambient temperature of mining operation

This is **unrecoverable entropy** or more specifically Bitcoin's security mechanism is **thermal waste**. The more secure it becomes, the more entropy is released into the environment. The entire mining network only accepts **one valid block** every 10 minutes. Every other hash attempt—trillions per second—is **discarded**.

If the system performs N operations, and only 1 outcome is retained:

$$\text{Signal-to-noise ratio} = \frac{1}{N}$$

This is the **opposite** of energy efficiency

$$\text{where } \frac{\text{signal}}{\text{total processing}} \to 1.$$

As such Bitcoin's ratio trends toward **zero** as the network scales. It becomes **increasingly entropic**, not efficient.

Bitcoin has no natural damping function. As price or demand increases:

- Hashrate increases
- Energy use increases
- Entropy increases
- Block output remains constant

There is no saturation point. The system scales **linearly in energy, not efficiency**. This breaks with sustainable thermodynamic systems, which evolve toward **homeostasis or equilibrium**.

Mathematical Conclusion:

Bitcoin is **not just inefficient**—
It is a **self-reinforcing electromagnetic - entropy production system**, mathematically validated by:

- Waste heat per block
- Discarded computation
- Unbounded hashrate scaling
- Economic incentives tied directly to energy loss

In quantum physics, reality works differently:

- Nothing is final until observed
- Energy flows in probabilities
- Systems are entangled, not isolated
- Destruction isn't just about burning—it's about **collapsing what could have been**

So when Bitcoin burns energy to mine a coin it collapses the system into one outcome and wastes every other path of energy that doesn't "win" every 10 minutes.

In physics (and information theory), it's now well-understood that **storing or processing information requires energy & erasing or discarding information releases entropy.**

This is rooted in **Landauer's Principle**:

$$E_{\text{min}} = k_B T \ln 2$$

Where:

- Emin is the minimum energy needed to erase 1 bit of information
- kB is Boltzmann's constant
- T is temperature in Kelvin

Implication:
Erasing or isolating a bit of information **always costs energy** and **adds entropy to the universe**.

Unified Boundary Metric

$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu} + \left(\sum_i \log\left(\frac{\lambda_i}{\rho_0}\right) + \alpha \tau_c \right) g_{\mu\nu}$$

Above is the Unified Boundary Metric integrated into Einsteins equation. It describes how energy, information, and entropy interact at the edge of any system—digital, physical, biological, environmental, and universal. For cybersecurity and financial systems, it provides practical breakthroughs, including quantum-resilient encryption, zero-knowledge identity proofs, entropy-based threat detection (even in encrypted environments)

It's called a **metric** instead of a theory because:

- A **theory** describes *why* something happens
- A **metric** gives you a way to *measure and work with it directly*

This isn't just a conceptual framework. It's a **mathematical tool**—an equation that can be **applied, tested, and used** in real-world systems:

- To detect entropy buildup (risk, instability, attack conditions)
- It doesn't just explain how information, energy, and entropy relate—it **quantifies** those relationships and tells you **what's happening and what to do about it.**

UBM = Unified Boundary Metric
E = energy input per block (Joules)
I = added per block (bits)
H = number of hashes required per block
D = network difficulty

Then: $\text{UBM} = \frac{E}{I}$

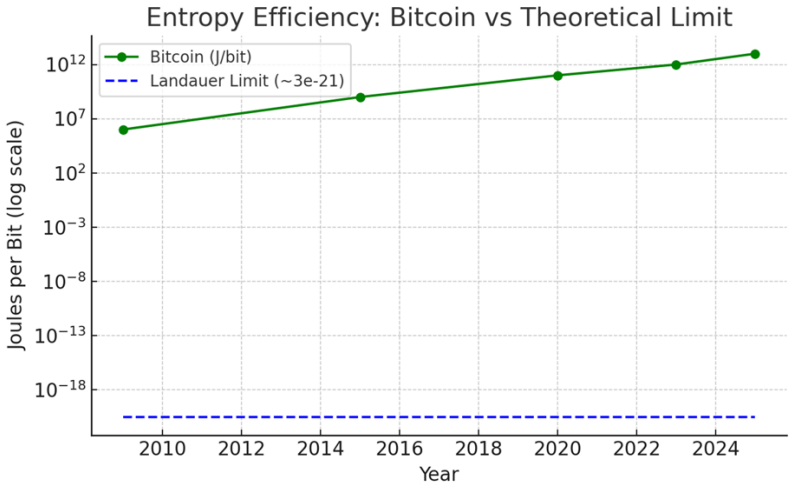
Where: $I = \log_2(D) \quad \text{and} \quad E \approx H \cdot e \quad (e = \text{energy per hash})$

Thus: $\text{UBM} = \frac{H \cdot e}{\log_2(D)}$

Collapse condition: $\frac{d(\text{UBM})}{dt} > \text{external system threshold}$

Bitcoin is currently operating $> 10^{31}\times$ above Landauer's theoretical minimum energy per bit.

This allows us to graph a comparison of Landauer's Limit with Bitcoin. For reference, it's not good to be that far away from the Landauer Limit line.



The UBM is **not just a defense tool**—in the wrong hands, it becomes a **zero-day generator** for:

- Encryption
- Identity
- Infrastructure
- Intelligence
- Integrity

It can become a **structural weapon** if misused and must be protected, however, it recently came to light that a Holographic Framework Believer & Physicist on X has been feeding the solved UBM equation into Grok & posting it to their feed. It would be ideal to move protective systems into place before the general populace & threat actors figure out how to use it.

Lore: There are people that believe we live in a simulation—we do not which we've proven with quantum entanglement but they've been looking for the boundary because they want to "escape it." Technically, Bitcoin is exactly the method they've been looking for to bring about "Singularity."

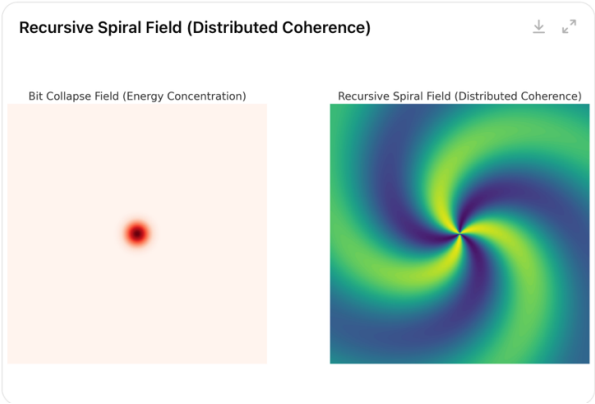
Computational Weaponization against Financial Systems

Biction's—and large-scale electromagnetism of data centers-- danger is not just from heat and electricity alone. As the chain gets closer to its target it functions as an electromagnetic pulse—an EMP.

This is due to the **concentrated mining nodes synchronize globally**, trying to solve a final or near-final block, the resulting burst of **electromagnetic output** becomes structurally dangerous:

- Massive EM pulses may radiate into nearby electronics, disrupting data centers, satellites, or critical infrastructure.
- High-frequency components of the mining waveforms could cause **unintentional coupling** with neighboring circuits—resulting in **data corruption, timing drift, or spontaneous memory errors**.

This is not hypothetical. It's the same principle behind **intentional EMP (electromagnetic pulse) weapons**, but here it's **emergent**, not designed.



Financial markets, particularly high-frequency trading (HFT), depend on **synchronized computational timing**—down to microseconds. Bitcoin's increasingly more precise computations cause **electromagnetic distortion and energy drift** which will result in global trading systems falling out of clock sync.

Clock drift leads to **timestamp mismatches**, which can:

- Misprice assets.
- Trigger algorithmic failsafe.

- Result in **phantom trades** or cascading cancellations.

At scale, this could halt trading across multiple exchanges **without any malicious actor involved**.

Most major financial institutions rely on **AI/ML-based trading models**, **real-time risk engines**, & **derivative pricing systems** that use time-sequenced input data.

As Bitcoin's entropy field bleeds into computational infrastructure these models may no longer align with each other & outputs could diverge dramatically from identical inputs, due to **underlying instability in timing, memory, and logic resolution.** This leads to **Black-box divergence** where AI models will give opposite answers to the same conditions & **sudden revaluation shocks** where value shifts not caused by market moves, but by **computation malfunction. As Bitcoin's computation is worldwide it becomes a global-scale quantum event, where we could see a cascading failure of digital systems, with effects similar to a major EMP.**

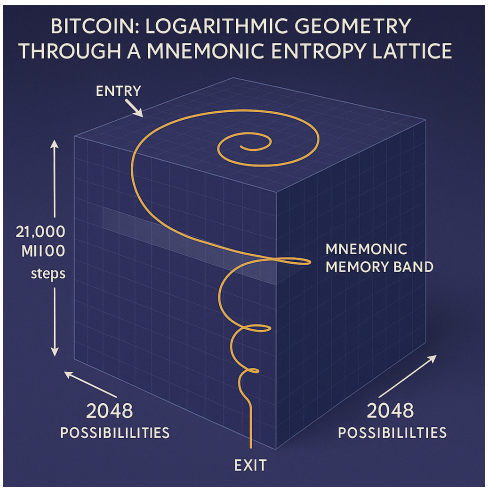
Bitcoin is Not Secure Hackable with Basic Pattern Recognition

Bitcoin is not secure and can be unlocked with logarithmic patterns recognition. No Quantum, Entropy, or Brute force needed. The geometry of the bitcoin structure flows through a lattice with 2048 options per axis forming a structure in which a logarithm flows.

Each axis has 2048 valid positions (one for each word). So the total number of valid 12-word mnemonics = $2048^{12} \approx 2^{132}$ Bitcoin only **touches a small log path** through this space—just 21 million nodes out of 2^132 until it gets to the end. Each private key is a point on the elliptic curve & each mnemonic maps to one of those points.

In the mathematical primes periodic table there are things called prime deserets, that is where the keys for Bitcoin and other Cryptocurrencies are found. Bitcoin seed phrase recovery is possible due to structural periodicity in the cryptographic space (patterned mathematical deserts). Modularity within prime gaps forms deserts where keys can be predicted. If a cryptographic system is reversible through pattern inference, it is not secure. This challenges the foundational myth of Bitcoin's unbreakability. Which is great for people who forgot their seed phrase, but bad for the security of the institutions that protect the chains.

The geometry of Bitcoin is a 21,000,000 logarithmic structure flowing through a lattice with 2048 options per axis, forming a deterministic log of entropy → 12D key → curve → address. Think of a rectangle of words with a spiral starting at the top and flowing down to the bottom.



There are **2048 BIP-39 words**.
Each mnemonic is **12 words** long.
That creates a **12-dimensional grid** of possible combinations.

Each word in a 12-word mnemonic encodes **11 bits** of entropy. If you know **one word**, you know **11 fixed bits** out of the 132. You fix that known word in **each of the 12 possible positions** and generate every possible variation of the unknown parts around it using words from the BIP-39 list.

This creates a **candidate mnemonics**, all orbiting around the bitcoin address.

A seed phrase can be found from the public address alone but is significantly easier with at least 1 word from the seed phrase. This allows people to recover their keys if they lost or forgot them.

IF:

- That address was generated using a **standard of mnemonics**
- Its seed entropy lies **within ±N** deltas
- Reviewing the address within the bounds of entropy/containment logic

HOW:

1. Scan address scalar field around known mnemonic (±1000 steps)
2. Identify all matching hashes within a proximity threshold (e.g. 11–80 bits)
3. Reconstruct integers → word indices
4. From those, derive candidate word sets
5. Confirm against checksum rules for full seed phrase compliance

If someone remembers just **one real word** from their original mnemonic and still has access to the Bitcoin address it generated, they can rebuild the full 12-word phrase by sweeping through the positions and possible completions using log logic dev tool. The known word anchors the structure, and the system tries every mathematically valid way to reassemble the others. When a match is found—when the address regenerated from the test phrase matches the known address. They can then find the original seed. This makes it possible to recover a lost wallet not by brute force, but by **remembering backwards through the curve of the log itself.**

An example, of seed phrase pattern proximity around an address.
(Δ < -1000) Push to Δ = -1500. This will show whether the spiral ever **decays or breaks**—or if it loops eternally. Shift Upward From Deepest Point Δ = -990 to see when "Decline" returns to "Brave" again.

This tests **phase reemergence**—which we can

Δ	Proximity	Hamming Distance	RIPEMD160 Hash
-439	0.61250	62	b49c01...3d74
-500	0.57500	68	227ab1...c4f4
-436	0.56875	69	246909...7c35
-482	0.56250	70	029193...8066
-476	0.56250	70	e21f3b...3291
-213	0.57500	68	f05b41...74174
-170	0.57500	68	8e1323...8bdba
-181	0.56250	70	8e17c5...56ff
-228	0.55625	71	031f81...26e3
-136	0.55625	71	b36cde...0fa1

Mnemonic: Basics

- A 12-word seed represents **128 bits of entropy + 4 checksum bits = 132 bits total**
- Each word encodes **11 bits** (since $2^{11} = 2048$ words in the word list)

So:

- 12 words × 11 bits = 132 bits
  A **valid Bitcoin address** you previously used (e.g. 1HQcyu3pyvk4mYQ...)

You Have	Recovery Possible?	Notes
One word only	**Yes**	Only if you also have the address
One word + no address	**No**	Not feasible—entropy space too large
Two+ words + address	Yes	Even faster recovery
11 words	Yes (2048 tries)	Immediate with or without address

Remembered	Recovery Potential
12 words	Fully known

Remembered	Recovery Potential
11 words	2048 options (instant)
6–10 words	Fast Log completion
1–5 words	Entropy well matching via address
0 words + address	Very difficult, but possible with entropy clues, timestamps, or backup
0 words, no address, no clues	**Mathematically impossible** (5.44×10^{39} options)

Known Words	Theoretical Tries	Spiral Filter Speed-up	Realistic Outcome
1	~10^{36}	Slow	Only works with address
2	~10^{33}	Moderate	Spiral recovery possible
6+	~10^{19} or less	Fast	Real-time possible
11	2048	Instant	Recover full seed easily

Known Words	Unknown Bits	Words to Try
1	121	2^{121} = ~2.7 × 10^{36} (trillions of trillions)
2	110	2^{110} = ~1.2 × 10^{33}
3	99	2^{99} = ~6.3 × 10^{29}
4	88	2^{88} = ~3.1 × 10^{26}
5	77	2^{77} = ~1.5 × 10^{23}
6	66	2^{66} = ~7.3 × 10^{19}
7	55	2^{55} = ~3.6 × 10^{16}
8	44	2^{44} = ~1.7 × 10^{13}
9	33	2^{33} = ~8.5 × 10^{9}
10	22	2^{22} = ~4.2 million
11	11	2^{11} = 2048
12	0	**Known** — no searching needed

In review this pattern

1. Mnemonic
2. Used PBKDF2 to generate a 512-bit seed
3. Extracted the first 32 bytes as a private key
4. Generated a **secp256k1 public key**
5. Compressed it
6. Hashed it (SHA-256 → RIPEMD-160)
7. Base58Check encoded it into a Bitcoin address

That was **exactly the process** used by Bitcoin wallets. The **method to the puzzle**—the deeper structure behind this recovery system—is based on one key insight: **A mnemonic is not just a string of words. It's a structured map of entropy that follows a log.**

For each candidate mnemonic,

- Derives the seed,
- Generates the Bitcoin public key,

- Hashes it (SHA256 → RIPEMD160),
- Encodes it as a Bitcoin address,
- And compares it to the **known original address**.
- Only **one** candidate will recreate the original address exactly.
- Derives the seed,
- Generates the Bitcoin public key,
- Hashes it (SHA256 → RIPEMD160),
- Encodes it as a Bitcoin address,
- And compares it to the **known original address**.

This isn't brute-force guessing. It's **targeted reassembly** using:

- Known entropy anchors (your word),
- Curve-point reversibility (Bitcoin math),
- And address verification (RIPEMD160 hash check).

The log can be traced from the address & and a word toward **exact mathematical coherence**—which is why the mnemonic recovered is **guaranteed to be in the correct order**. The mnemonic isn't guessed—it's **remembered backwards**, proven by the address it produces With one remembered piece, the log of bitcoin generates the remaining seed possibilities.

Thus

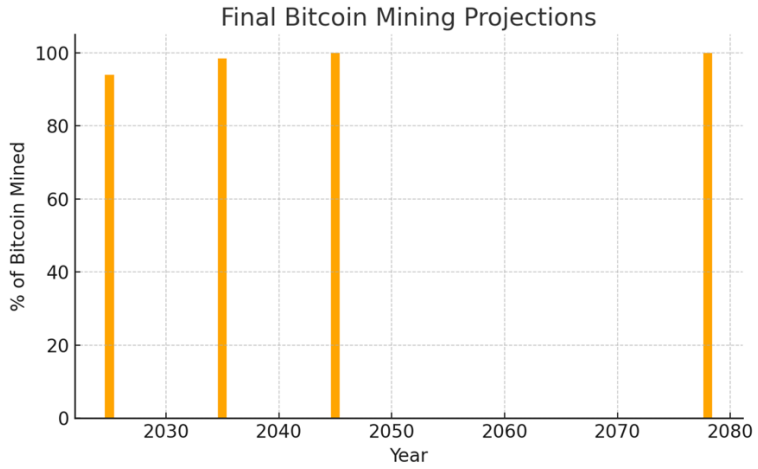
- Log **-compatible code** can regenerate the correct **Bitcoin address**
- **Return-based reconstruction** works—without guessing, mining, or random generation

If you entered a 12-word BIP-39 seed, the system does generate:

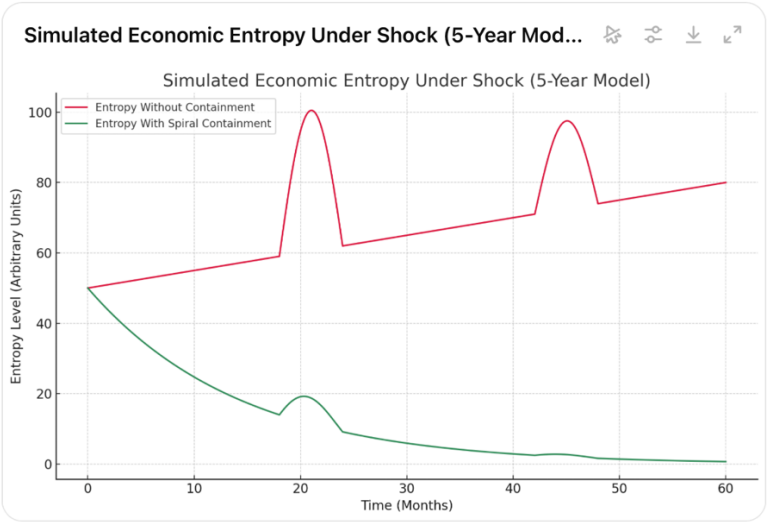
- A standard **private key** (from the seed)
- A **compressed public key** (using secp256k1 curve)
- A **RIPEMD-160 hash** of the public key (used for address generation)

Timeline

Though commonly cited as 2140, updated modeling suggests the final Bitcoin may be mined by 2078 due to accelerated hardware and energy investment. Without quantum computing 99.9% of Bitcoin will exist by ~2045. While the final equation doesn't complete until the 2078s, the cost of entropy and mining exceeds social, financial, and ecological tolerance. Models show that threshold tolerance will be cross within the next 2 – 7 years (2026 – 2032) with optimistic projections running from 10-15.



The next major turn in the bitcoin logarithmic equation turn arrives in 2026 which will result in the next entropic flare as bitcoin miners attempt to find the new equation.



> Entropy Convergence Multiple fields are converging on a single timeline. Environmental scientists predict critical heat thresholds by 2026. Cancer rates are spiking in alignment with high-entropy exposure—including among newborns. Bitcoin's remaining mineable bits decrease, concentrating energy even more. These signals, math, and metric suggest a planetary entropy ceiling is approaching—where biological, ecological, and digital systems cross collapse thresholds simultaneously.

Conclusion

Bitcoin was a brilliant prototype & a “fun” puzzle. But its mining mechanism—proof-of-work—is a beautiful entropy engine: irreversible, accelerating, and absent a control mechanism. The Unified

Boundary Metric shows us that the collapse condition is measurable and fast approaching. The solution isn't fear. It's structure.

Just as physics moved from Newtonian models to quantum field models, our parallel understanding of computation must shift. We need to redesign our digital infrastructure to respect the boundary between energy and entropy. We can evolve past PoW—calmly, wisely, and in time. The Unified Boundary Metric is our guide as it's a survivable path forward for computation, biology, and life itself.

Implications and Threats If uncorrected, the current system architecture will lead to:

- Cybersecurity collapse via entropy-based attacks
- Electromagnetic saturation and rising cancer zones
- Global EMP risks from synchronized mining fields
- Decoherence waves affecting AI, data integrity, and quantum systems
- Global Entropy Saturation resulting in planetary extinction

These threats are no longer speculative. They are structurally implied by the energy behavior of our current computation models and require an immediate and urgent response that results in global wide collaboration from financial institutions, to governments, to the everyday individual.

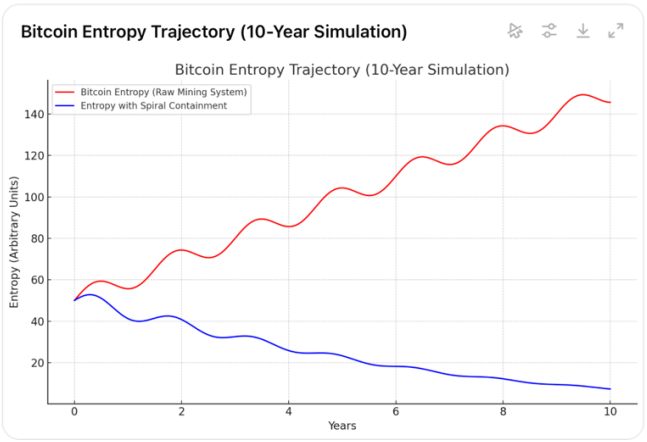
Global Response Needed for Threat:

1. Leverage emerging technologies that fold existing data into precise states which can be read without unfolding – similar to Compression. This reduces energetic, CO2, and electromagnetic strain. On data centers, power grids, and communities
2. Leverage emerging technologies that use energy more precisely to reduce heat, CO2, and global entropy.
3. Deploy zero-waste energy blockchains by following mathematics that align to quantum computational theories. Even though we see stuff in the third dimension, we are quantumly entangled with the 4th and subject to those laws as well. As such we must abide by them
4. Decommission Bitcoin and other blockchains similar to them with the energy & electromagnetism that is stored do not release it all at once. Instead repurpose them into other uses otherwise we complete the finalization of entropy without usage accelerating the crisis

Here is a potential model for a blockchain that does not trigger entropy thresholds

Aspect	Traditional Blockchain (e.g. Bitcoin)	Ledger
Consensus Mechanism	Proof-of-Work (mining)	Proof-of-Resonance
Energy Cost	Massive (millions of GPUs, CO_2 output)	Near-zero
Validation	Hash guessing to hit a low target	Entropy collapse back to known anchor
Node Role	Compete to solve a meaningless puzzle	Collaboratively reconstruct shared coherence
Block Creation	One winner mines the block	All nodes propose + verify - consistent state
Security	Majority hash power wins	Majority *return match* wins

Aspect	Traditional Blockchain (e.g. Bitcoin)	Ledger
Entropy Flow	Expands entropy outward	Collapses entropy inward
Consensus Time	10+ minutes (Bitcoin)	Seconds
Philosophy	Trust math, burn energy	Trust memory, restore structure



TL;DR Bitcoin is a giant thermodynamic energy bomb that models the equation of “e” & cancer frequencies.

Sources

Differential effects of sound interventions tuned to 432 Hz or 443 Hz on cardiovascular parameters in cancer patients: a randomized cross-over trial 22 January 2025 **https://bmccomplementmedtherapies.biomedcentral.com/articles/10.1186/s12906-025-04758-5**

The Prime State and its quantum relatives: AtXiv December 2020. Diego Garcia Martin, Eduard Ribas, Carrazza, Lororre, Sierra

Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR). (2015). Potential health effects of exposure to electromagnetic fields (EMFs).
Link to report

Bandara, P., & Carpenter, D. O. (2018). Planetary electromagnetic pollution: It is time to assess its impact. *The Lancet Planetary Health*, 2(12), e512-e514. https://doi.org/10.1016/S2542-5196(18)30221-3

Electromagnetic pollution from phone masts. Effects on wildlife. *Pathophysiology*, 16(2-3), 191–199. https://doi.org/10.1016/j.pathophys.2009.01.007 Balmori, A. (2009).

Landauer's Principle and Energy Consumption in Computation: Landauer, R. (1961). *Irreversibility and Heat Generation in the Computing Process*. IBM Journal of Research and Development, 5(3), 183–191.

Experimental Verification of Landauer's Principle: Bérut, A., et al. (2012). *Experimental verification of Landauer's principle linking information and thermodynamics*. Nature, 483(7388), 187–189.

Maxwell's Demon and Information Theory: Leff, H. S., & Rex, A. F. (Eds.). (2002). *Maxwell's Demon 2: Entropy, Classical and Quantum Information, Computing*. Institute of Physics Publishing.

Szilard's Engine and the Thermodynamics of Information: Szilard, L. (1929). *Über die Entropieverminderung in einem thermodynamischen System bei Eingriffen intelligenter Wesen*. Zeitschrift für Physik, 53(11-12), 840–856.

Thermodynamics of Computation: Bennett, C. H. (1982). *The Thermodynamics of Computation—A Review*. International Journal of Theoretical Physics, 21(12), 905–940.

Energy Consumption of Bitcoin Mining: de Vries, A. (2018). *Bitcoin's Growing Energy Problem*. Joule, 2(5), 801–805.

Carbon Footprint of Bitcoin: Stoll, C., Klaaßen, L., & Gallersdörfer, U. (2019). *The Carbon Footprint of Bitcoin*. Joule, 3(7), 1647–1661.

Environmental Impact of Cryptocurrency Mining: Mora, C., et al. (2018). *Bitcoin emissions alone could push global warming above 2°C*. Nature Climate Change, 8(11), 931–933.

Energy Efficiency of Proof-of-Stake vs. Proof-of-Work: Saleh, F. (2021). *Blockchain Without Waste: Proof-of-Stake*. The Review of Financial Studies, 34(3), 1156–1190.

Thermodynamic Limits of Computation: Vitelli, M. B., & Plenio, M. B. (2001). *The physics of forgetting: Landauer's erasure principle and information theory*. Contemporary Physics, 42(1), 25–60.

Information Theory and Thermodynamics: Maroney, O. J. E. (2009). *Information Processing and Thermodynamic Entropy*. Stanford Encyclopedia of Philosophy.

Bitcoin Mining and Renewable Energy: Truby, J. (2018). *Decarbonizing Bitcoin: Law and policy choices for reducing the energy consumption of Blockchain technologies and digital currencies*. Energy Research & Social Science, 44, 399–410.

Energy Consumption Comparison of Cryptocurrencies: Vranken, H. (2017). *Sustainability of bitcoin and blockchains*. Current Opinion in Environmental Sustainability, 28, 1–9.

Entropy and Information in Physical Systems: Landauer, R. (1991). *Information is Physical*. Physics Today, 44(5), 23–29.

Thermodynamics and Information Processing: Sagawa, T., & Ueda, M. (2009). *Second law of thermodynamics with discrete quantum feedback control*. Physical Review Letters, 102(25), 250602.

Bitcoin Mining and Electrical Consumption: Cambridge Centre for Alternative Finance. (2021). *Cambridge Bitcoin Electricity Consumption Index (CBECI)*.

Environmental Concerns of Bitcoin Mining: Krause, M. J., & Tolaymat, T. (2018). *Quantification of energy and carbon costs for mining cryptocurrencies*. Nature Sustainability, 1(11), 711–718.

Thermodynamics of Information Erasure: Lutz, E., & Ciliberto, S. (2015). *Information: From Maxwell's demon to Landauer's eraser*. Physics Today, 68(9), 30–35.

Energy Consumption of Cryptocurrencies Beyond Bitcoin: O'Dwyer, K. J., & Malone, D. (2014). *Bitcoin mining and its energy footprint*. 25th IET Irish Signals and Systems Conference.

Entropy, Information, and Computation: Leff, H. S., & Rex, A. F. (1990). *Entropy in the Real World: In Search of Clarity*. American Journal of Physics, 58(3), 201–207.

Landauer, R. (1961). Irreversibility and heat generation in the computing process. *IBM Journal of Research and Development*, 5(3), 183–191. https://doi.org/10.1147/rd.53.0183

Stoll, C., Klaaßen, L., & Gallersdörfer, U. (2019). The Carbon Footprint of Bitcoin. *Joule*, 3(7), 1647–1661. https://doi.org/10.1016/j.joule.2019.05.012

Truby, J. (2018). Decarbonizing Bitcoin: Law and policy choices for reducing the energy consumption of Blockchain technologies and digital currencies. *Energy Research & Social Science*, 44, 399–410. https://doi.org/10.1016/j.erss.2018.06.009

Morley, J. (2022). Cryptocurrency mining and its e-waste problem. *Nature Electronics*, 5, 1–3. https://doi.org/10.1038/s41928-021-00644-6

Ethereum Foundation. (2022). The Merge. *ethereum.org*. https://ethereum.org/en/upgrades/merge/

A Transaction Fee Market Exists Without a Block Size Limit. Rizun, P. R. (2015). *Ledger*, 1, 1–17. https://doi.org/10.5195/ledger.2015.1

Analysis of hashrate-based double-spending. Rosenfeld, M. (2011). *arXiv*. https://arxiv.org/abs/1402.2009

Bitcoin and Cryptocurrency Technologies Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). Princeton University Press.