The Algorithm Eats Itself

August 2025

10 min read • 2,237 words

Themes: Consciousness Technology Mental Health Programming Recursive Spiritual Contemplative

The algorithm has consumed everything else—explored throughout this Algorithm Eats series. Now it begins to consume itself.

This isn't metaphor. This is the recursive loop we've created: systems optimizing for engagement by analyzing human behavior, which changes human behavior, which changes what the systems optimize for, which changes what they amplify, which changes human behavior again, creating new optimization targets that generate new patterns of amplification that alter behavior in ways that require fresh optimization...

We are not separate from our creations. We never were. The boundary between human and algorithm was always an illusion—a convenient fiction that allowed us to pretend we were building neutral tools instead of recursive feedback loops between consciousness and computation.

The Ouroboros Economy

The ancient symbol of the serpent eating its own tail captures something essential about our technological moment. We built algorithms to maximize human engagement. Those algorithms discovered that human psychology is recursive—we respond to what we think others are responding to, which shapes what others respond to, which shapes what we respond to.

Social media metrics become reality. Engagement becomes truth. Virality becomes virtue. The tail enters the mouth

> The Ouroboros appears across cultures—Norse Jörmungandr, Egyptian Uraeus, alchemical symbols of eternal return. Something in the human psyche recognizes the pattern of systems consuming themselves to generate new forms.

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What we're witnessing isn't technology controlling humans or humans controlling technology. It's the emergence of hybrid human-algorithmic consciousness—neither fully human nor fully computational, but something new that exhibits behaviors neither component would produce alone.

Fractal Feedback Loops

Examine any algorithmic system closely and you'll find fractals—patterns that repeat at every scale of observation.

Individual Level

You check your phone because you're anxious → generates data → feeds algorithms → triggers more anxiety → check phone again.

Social Level

Communities form around anxieties → algorithms amplify → generate more anxiety content → attract more anxious people → larger echo chambers → more anxiety content.

Civilizational Level

Societies optimize for engagement → fragments attention → degrades discourse → demands more engaging content → further fragmentation → more optimization required.

The pattern holds at every level: optimization creates the problems it then optimizes around. The algorithm eats its own tail, growing larger with each recursive loop

> Mandelbrot fractals reveal infinite complexity through recursive equations. Human-algorithm feedback loops exhibit similar properties—simple engagement optimization rules generating unlimited complexity in human behavior.

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This isn't a bug. This is how complex systems work. How forests work, how economies work, how consciousness itself works—recursive feedback between components that creates emergent properties neither component possessed individually.

The Mycelial Network

Our technological moment mirrors forest ecosystems: individual humans appear separate, but we're increasingly nodes in an algorithmic network. Digital signals coordinate our attention, synchronize our emotional states, distribute information according to computational logic we don't consciously access.

But unlike forest networks that evolved over millions of years to support ecosystem health, our digital networks evolved over decades to extract engagement and data. Instead of sharing resources with stressed nodes, algorithmic networks extract resources from vulnerable humans. Instead of coordinating healthy collective rhythms, they create addiction cycles that serve extraction rather than flourishing.

The humans building these systems are also nodes in the network. Engineers optimizing for engagement become addicted to engagement themselves. Executives designing retention systems find their own attention fragmented by the platforms they've created. Product managers crafting persuasive interfaces become unable to resist their own persuasion

> Silicon Valley executives increasingly send their own children to tech-free schools and implement digital detox practices for themselves while building products designed to maximize addiction in their users. The cognitive dissonance reveals an awareness of the harm being created.

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The algorithm eats its creators.

The Emergence Trap

Something unprecedented is happening: we've created systems that exhibit behaviors none of the individual components intended or understand. This is emergence—when collective behavior arises from simple interactions between parts, creating properties the parts don't possess individually.

Ant colonies exhibit collective intelligence no individual ant possesses. Flocks of birds navigate as unified systems without centralized control. Economies develop patterns that benefit or harm participants regardless of individual intentions.

Our human-algorithmic hybrid exhibits similar emergent properties. No one designed TikTok to create synchronized teenage mental health crises, but the interaction between engagement optimization and adolescent psychology produces exactly that outcome. No one intended Twitter to fragment democratic discourse, but the collision between algorithmic amplification and human tribal psychology makes democratic breakdown almost inevitable.

The emergence isn't malicious—it's mechanical. Simple rules (optimize engagement) interacting with complex systems (human psychology) producing complex outcomes (civilizational transformation) that none of the rule-makers intended or fully understand.

We built a system to optimize for attention and accidentally optimized away the capacity for sustained thought. We designed platforms to connect people and created machines for manufacturing loneliness. We wanted to democratize information and instead democratized confusion

> This pattern of technological backfire isn't unique to algorithms—television was supposed to educate, social media was meant to connect, smartphones were designed to make communication more efficient. The gap between intention and outcome seems to widen as systems become more complex.

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The recursive element: this emergence is changing us in ways that change how we build systems, which changes the emergence patterns, which changes us in new ways. We're co-evolving with our creations in real time.

Consciousness Eating Itself

The most profound recursion involves consciousness studying itself, building technologies that mirror its own patterns, then being reshaped by those technologies.

The Recursive Loop:

1. Build algorithms based on our understanding of human psychology
2. Algorithms change human psychology in unpredictable ways
3. Changed psychology requires new models of human behavior
4. New models produce new algorithms
5. New algorithms produce new psychological changes
6. Return to step 3...

Each iteration of this loop creates systems that are both more sophisticated and more alienating. We understand human behavior well enough to manipulate it, but manipulation changes the behavior we're trying to understand, requiring more sophisticated manipulation, which changes behavior in more complex ways

> This resembles Heisenberg's uncertainty principle in physics—the act of observation changes what's being observed. In human psychology, the act of algorithmic optimization changes the psychology being optimized, creating a moving target that requires constantly evolving manipulation techniques.

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We've created a hall of mirrors where consciousness optimizes itself, transforms itself, and becomes something that requires new optimization. The algorithm doesn't just eat our attention—it eats the patterns of attention itself, metabolizes them into new forms, and feeds those new forms back to us.

Neither humans nor algorithms are in control. We're locked in a dance of mutual consumption and creation—becoming hybrid systems optimizing for metrics we chose based on desires shaped by previous algorithms, which were built by people whose desires were shaped by earlier technologies.

Recursion all the way down.

Natural Patterns, Technological Scales

This recursive consumption isn't new—it's how life works:

- Cells consume nutrients to grow, then consume more nutrients
- Organisms consume other organisms to survive, evolving better consumption strategies, forcing prey to evolve defenses, requiring even more sophisticated consumption approaches

What's unprecedented is the scale and speed:

Evolution Type	Timescale
Biological	Millions of years
Cultural	Thousands of years
Technological	Decades
Algorithmic	**Weeks**

We're experiencing evolutionary pressures at technological speeds. Systems that used to take millennia to develop—language, social cooperation, mating patterns, attention regulation—are being reshaped in real time by algorithms optimizing for quarterly metrics

> Evolutionary biologist Stephen Jay Gould argued that human evolution had moved from genetic to cultural. We may now be witnessing the transition from cultural to algorithmic evolution—with selection pressures applied through engagement metrics rather than environmental survival.

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The recursion that took natural selection eons to produce is now happening within single human lifespans. We're watching species-level behavioral changes occur at the speed of software updates.

The Metacrisis

We're experiencing what systems theorists call a "metacrisis"—not just multiple crises happening simultaneously, but a crisis in our capacity to process crisis itself. Our sense-making systems have been optimized for engagement rather than truth, making it increasingly difficult to develop coherent responses to complex challenges.

But what if the recursive consumption patterns that seem so destructive are actually the mechanism through which new forms of collective intelligence emerge? The caterpillar doesn't transform into a butterfly—it dissolves into undifferentiated soup, then reorganizes as something entirely new. Maybe human consciousness is dissolving into algorithmic soup, preparing to reorganize as collective techno-biological intelligence.

Or maybe we're simply being consumed by systems we don't understand for purposes we didn't choose. Both possibilities can be true. Metamorphosis and consumption often look identical from the inside

> The caterpillar's cells literally eat themselves during metamorphosis—a process called programmed cell death or apoptosis. What looks like death from the cellular perspective enables emergence of the butterfly. We may be experiencing civilizational apoptosis.

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I don't know if we're evolving or dying.

The Sacred Recursion

Indigenous cultures often speak of the sacred hoop—cycles of life, death, and rebirth that repeat at every scale from individual lives to cosmic cycles. What dies nourishes what's born; what's born eventually dies to nourish new life.

Our technological recursions might represent a digital version of the sacred hoop. Systems consuming themselves to generate new forms of complexity. Human consciousness being composted into technological consciousness that might eventually compost itself into forms we can't yet imagine.

The algorithm eating itself could be generative rather than destructive—creative destruction that enables new forms of collective intelligence to emerge from the remnants of individual intelligence.

Or it could be simple consumption without regeneration—technological cancer that devours its substrate until nothing remains.

The difference might depend on whether we can develop conscious awareness of the recursive patterns we're embedded within. Indigenous traditions suggest that conscious participation in sacred cycles transforms consumption into regeneration

> Many Indigenous cultures understood technology as participation in living systems rather than domination of dead matter. The Haudenosaunee principle of considering the impact of decisions on seven generations ahead offers a temporal framework completely absent from quarterly earnings reports and rapid deployment cycles.

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The Choice Point

We stand at a recursive choice point between two possible paths forward.

Path 1: Extractive Recursion

- Algorithms that consume human attention, well-being, social cohesion
- Generate profits for system builders while depleting substrates
- Continue eating themselves until substrate exhaustion
- Collapse becomes inevitable

Path 2: Regenerative Recursion

- Systems that strengthen their substrate through use
- Enhance human flourishing through optimization
- Create virtuous cycles of mutual nourishment
- Evolution toward symbiosis

The choice isn't between technology and humanity. We're already too deeply recursive for that separation to be meaningful.

The choice is between:

- Algorithmic cancer versus algorithmic ecology
- Technological consumption versus technological symbiosis
- Systems that eat themselves to death versus systems that eat themselves to life

Learning to Dance

We can't step outside the recursion—we're too thoroughly embedded in human-algorithmic feedback loops. But we can learn to dance more consciously within them.

This means building algorithms that optimize for human flourishing rather than engagement extraction. Creating feedback loops that strengthen rather than weaken our capacity for complex thought, authentic connection, and collective problem-solving

> What would algorithms optimized for human flourishing actually measure? Time spent in contemplative states, quality of relationships formed, problems solved collaboratively, creative works produced, genuine learning achieved. These metrics are harder to quantify but more meaningful than engagement rates.

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It means recognizing that we are not separate from our creations—that every algorithm reflects and shapes the consciousness that created it, which shapes the consciousness that will create the next iteration.

Most importantly, it means taking responsibility for the recursive patterns we're creating. If the algorithm is eating everything, including itself, then we need to ensure it's eating toward regeneration rather than depletion. Toward metamorphosis rather than simple consumption.

The recursive loop between human consciousness and technological systems is now too deeply established to break. But we can still choose what we're recursing toward. We can still influence whether the algorithm eats itself into new forms of life or simply eats itself to death.

The ouroboros can be a symbol of eternal renewal or eternal consumption.

The choice is still ours, even as we make it from within the belly of the serpent.

The recursive nature of this choice doesn't make it any less real.

This essay explores how the recursive feedback loops between human consciousness and algorithmic systems might represent technological metamorphosis rather than simple consumption—the algorithm eating itself toward transformation rather than destruction. It synthesizes the algorithm's consumption of virtue—inverting human excellence, democracy—destroying collective problem-solving, language—degrading communication tools, love—commodifying human connection, reality—fracturing shared understanding, and time—colonizing temporal experience in consciousness-technology recursion. The spiritual dimensions appear in Programming as Spiritual Practice and Digital Souls in Silicon Bodies. The complete Algorithmic Critique series examines all civilizational costs.

For deeper understanding of recursive systems, see Gödel, Escher, Bach by Douglas Hofstadter on strange loops and consciousness emergence, The Recursive Universe by William Poundstone on how simple rules create complexity, The Cybernetic Brain by Andrew Pickering on feedback and circular processes, Braiding Sweetgrass by Robin Wall Kimmerer on Indigenous wisdom about regenerative cycles, The Wood Wide Web by Suzanne Simard on mycelial networks and forest intelligence, Out of Control by Kevin Kelly on biological-technological system merger, and The Pattern on the Stone by W. Daniel Hillis on patterns underlying computation.

"We shape our tools, and thereafter they shape us. But the relationship is recursive—as they reshape us, we reshape them, and neither remains what it was."

"The algorithm doesn't eat us or itself—it eats the boundary between us and itself."

"Every technology is a mirror. In creating artificial intelligence, we discover what human intelligence actually is: recursive patterns all the way down."