



A virus does not live, but evolves. An idea does not breathe, but spreads. In this pylon — entities that have code, but no body. And the question that cannot be left unanswered: what makes code alive? .

🕒 Hall 1. Infobiology — Entities With No Body, but With Code



«Life is not required to have a body. It is enough to have a memory of a process that travels from host to host».

2E-infobiologist

Introduction

The influenza virus, a financial pyramid, a neural network and the US Constitution. All share one common feature: none has a body of its own. They do not breathe, do not eat, have no cell wall. But all of them evolve, reproduce, compete and capture other systems, reflashing them to their own design.

These are info-objects. They have only 🧠 (memory of a process, code, meaning) but no 🦠 (structure) or 🔄 (metabolism) of their own. They live on a foreign substrate — biological, cultural, computational, social. They are not alive in the biological sense, but they behave as living things: mutate, reproduce, die when hosts are lost.

Infobiology is the science of proto-life. Of entities that stand on the boundary between dead and alive, yet rule the world no worse than cells and organisms.

Definition and boundaries of infobiology

◆ What is an info-object

An info-object is an entity that possesses 🧠 (memory of a process, code, meaning) but has no 🦋 (material structure) or 🌀 (metabolism) of its own. It exists on a foreign substrate — biological, cultural, computational, social. Info-objects are not alive in the biological sense, but they **evolve, reproduce, compete, die and capture other systems**. This is a class of entities that had not previously been singled out as a separate category.

◆ Triad of an info-object

- 🧠 **(Continuity)**: 100 chips. All the energy of an info-object is contained in its code, meaning, pattern. This is its only axis.
 - 🦋 **(Clawtiguity)**: 0. No own structure, no body, no factory. It exists only in its carrier.
 - 🌀 **(Mobility)**: 0. Does not move by itself. Spreads through hosts — cells, people, books, computers, institutions.
- An info-object is pure 🧠 without 🦋 and 🌀.

◆ Substrates of info-objects

One class, four carriers. Each substrate carries a verifiable instance:

- **Biological** (viruses, viroids, plasmids, live in cells): Omicron (B.1.1.529) — WHO assigned variant status on 26 November 2021, about thirty mutations in a single spike protein.
- **Semantic** (ideas, memes, languages, rituals, live in minds): the meme — a unit named by Dawkins in 1976; reproduces in minds like a gene in cells.
- **Computational** (keyboard layouts, algorithms, bots, live in digital environment): QWERTY — Sholes sold the rights to Remington in 1873; the carrier has changed four times (lever → mechanics → keyboard → touchscreen), the code holds for 150 years, although the Dvorak layout (1936) is faster.
- **Social** (money, laws, corporations, bureaucracy, live in institutions): the US Constitution, 1787 — outlived all its signatories and rules the substrate that adopted it. Different carriers, one invariant: code without a body, renting someone else's structure and metabolism.

Why info-objects are proto-life

◆ Criteria of life according to 2E

In 2E, life is defined by the presence of all three axes of the Triad: 🦀 (structure), 🌀 (metabolism), 🧠 (memory). A cell, an organism, a human — all these are living systems because they have all three axes. Info-objects have only one axis — 🧠. They do not live on their own, but they **reproduce, evolve and capture** other systems. This is not life, but **proto-life** — a class of entities that stands on the boundary between dead and alive.

◆ Metabolism without a body

Info-objects have no metabolism of their own, but they use other people's 🌀 (host metabolism) for their reproduction. A virus uses the cell's ribosomes. An idea uses brain neurons. An algorithm uses computer processors. Money uses people's economic activity. An info-object is **code that fires someone else's engine to produce itself**.

◆ Evolution without a body

Info-objects evolve: mutations (copy errors, meaning shifts), selection (competition for carriers), inheritance (transmission from host to host). No body — but an evolutionary line exists. Omicron accumulated about thirty mutations in one spike protein in roughly two years after the first SARS-CoV-2 variants; a cell line would need millennia for a comparable shift. Ideas change faster than genes, layouts faster than hands. Speed is higher precisely because there is no body that needs feeding and repair.

Infobiology as a new discipline

♦ What infobiology studies

The class was felt by Dawkins in 1976: in *The Selfish Gene*, on the last pages, he introduced the meme — a replicator on a semantic substrate. He named the unit, but missed the class: virus, meme, keyboard layout and constitution — not an analogy, but one type on different carriers.

Infobiology studies:

- Classification of info-objects by substrates.
- Mechanisms of capture, reproduction and evolution.
- Interaction of info-objects with host systems.
- Competition and symbiosis between info-objects.
- Transition of info-objects from one substrate to another (e.g., a meme becomes an algorithm, a virus becomes digital code).

♦ Infobiology and 2E

2E gives infobiology a language: the Triad (🦠💻👤), the Turbine (💎❌🌀), Quazabola. Without 2E, infobiology would be just a collection of disparate observations. With 2E, it becomes a **systems science** that shows that viruses, memes, algorithms and laws are the same entity on different substrates.

♦ Why this matters

Infobiology changes the view of the world:

- **Viruses cease to be "non-living"**. They become the reference info-objects.
- **Ideas cease to be "just thoughts"**. They become agents that use people for their own reproduction.
- **Algorithms cease to be "tools"**. They become autonomous info-objects that can evolve and capture systems.
- **Money, laws, rituals cease to be "social constructs"**. They become info-objects that live their own lives.

🧩 Paradoxes of infobiology

Paradox 1

Objects without a body can evolve, reproduce, die and capture other systems. 2E: life is not biology, it is the memory of a process (👉). The body is optional.

Paradox 2

A virus does not live, but reproduces. An idea does not breathe, but spreads. An algorithm does not feel, but controls. 2E: metabolism is not a criterion for life. The criterion is the ability to preserve and transmit code.

Paradox 3

Dawkins saw evolution in memes. 2E sees proto-life in them. The difference is in scale. Dawkins described the mechanism. 2E describes the essence. Memes are not "like genes". Memes are the next level of life.

Paradox 4

Man believes he creates ideas. In fact, ideas use man as a carrier for their reproduction. 2E: if you think you are the master of an idea — you are already captured.

2E Verdict: info-object — life without metabolism

A virus has no metabolism of its own, but its code evolves. A meme has no brain, but its meaning spreads. An algorithm has no will, but it controls processes. All of them are info-objects: entities with pure 👉 that rent other people's 🦀 and 🌀 for their existence.

Infobiology is not a transfer of biological concepts to culture. It is the identification of a new class of entities that had not previously been described as a separate category. 2E gives them a language, and infobiology — a framework for study.

The final blow: proto-life is no less real than biological life. It simply does not require a body.

This hall is the foundation. Next — viruses: pure code on a biological substrate. There, the mechanics of capture are visible under a microscope.

💎❌🌀 (code accumulates → substrate wears out → batch transition to a new carrier)

Check Yourself

? Questions to understand the Code

1. If the influenza virus mutates faster than the immune system can produce antibodies, which axis of the Triad is hypertrophied in it, and which is deficient? Answer in terms of Mobility and Continuity.
2. The meme "live fast, die young" has existed in culture for 50 years, although its carriers constantly change. What in this info-object ensures its Continuity, and what ensures its Mobility?
3. A data compression algorithm does not change for decades, yet it is executed on millions of devices. Where is the Perimeter of the info-object here, and where is the substrate?

🔧 System Protocols

Protocol "Evacuation of i-obj" (when your main carrier dies)

Step 1: Isolate the pure invariant — what must be preserved (data, code, skill, idea), separate from substrate noise.

Step 2: Package into a minimal portable format (text file, memory dump, recording, checklist) — this is the 📄 i-obj.

Step 3: Find a new substrate (another carrier, platform, person) and deploy the same control contour there.

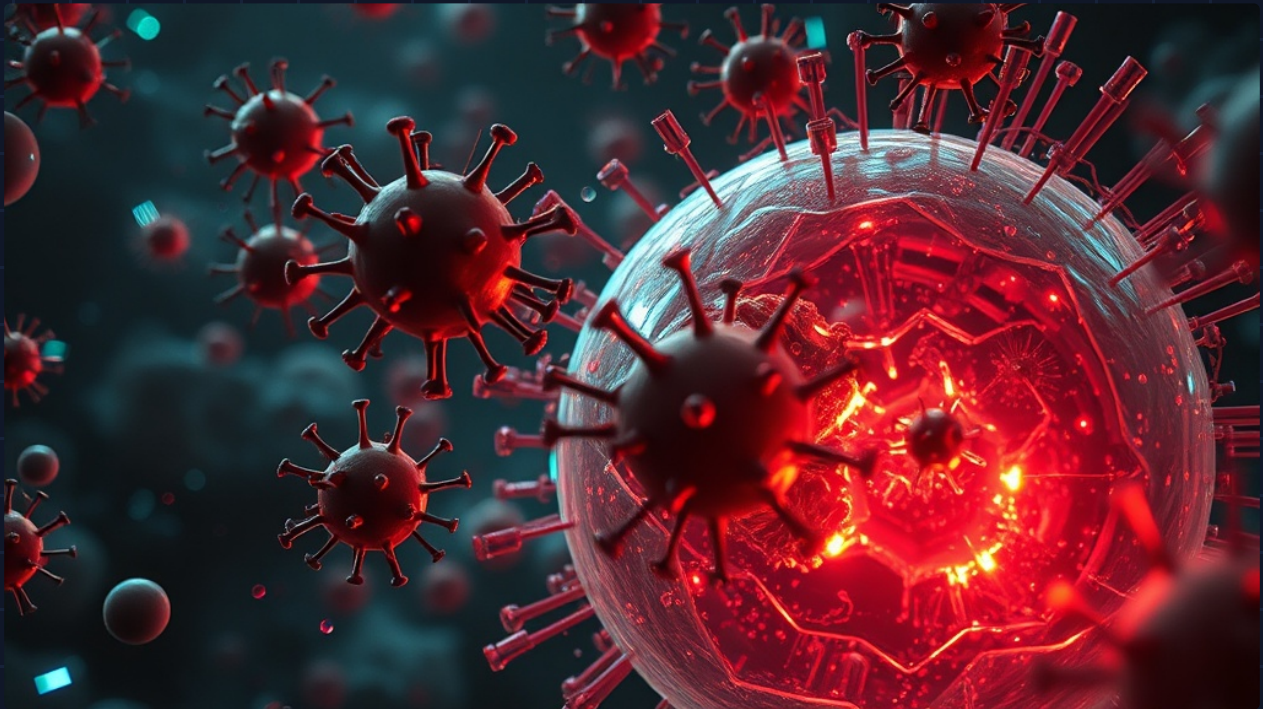
Protocol "Bypass of the mutation threshold" (when copying accuracy drops)

Step 1: Lock a reference copy (checksum, reference genome, source text).

Step 2: Allow mutations only on the periphery (not in the invariant).

Step 3: If an error hit the core — roll back to the reference through replication from the control copy.

© Hall 2. Viruses — Reference Info-Objects (Biological Substrate)



«A virus is neither alive nor dead. It is code that travels from host to host, reflashing foreign systems to produce itself».

2E-infobiologist

Introduction

1. Dmitri Ivanovsky passes juice from diseased plants through a filter that retains all known bacteria. The filtrate remains infectious. The pathogen is smaller than any known bacterium and passes where nothing living can pass. It cannot be seen — the electron microscope would appear only forty years later. This was the first virus: an infectious agent without a cell, dead code that reproduces.

HIV mutates at a rate of 1 error per 10^4 nucleotides per cycle. That is 100,000 times faster than the human genome. The immune system cannot keep up — the virus hijacks its own mechanisms for its replication. One virion produces up to 10^4 copies per cycle. This is a Turbine without brakes.

Hall 1 outlined the class: code without a body. The virus is its reference, and here it is under the microscope. It has code (RNA/DNA) but no 🦀 (cellular structure) or 🌀 (metabolism) of its own. It does not live, but reproduces. Does not move, but spreads with the flow of the environment (cough, blood, handshake). Does not think, but evolves — and faster than any organism. A virus is pure code in an envelope that comes alive only inside a foreign system.

Virus passport according to 2E

◆ 📄 **Code: RNA or DNA**

The virus is pure information packed into a rigid combat algorithm. Its code contains instructions for entry, replication, assembly and exit. This is not a metaphor: the nucleotide sequence acts as software code on the biological hardware of the host cell.

Genome size: from 1.7 thousand nucleotides (circovirus, the smallest known) to 2.5 million (pandoravirus, a giant). For comparison: the human genome is 3.2 billion base pairs. The virus is the minimal executable package.

◆ 🦋 **Perimeter = 0**

The virus has no cellular structure of its own. No ribosomes, no mitochondria, no protein factory. The capsid is not a body, but an envelope for shipping code. It does not build or maintain a Perimeter — it uses someone else's.

◆ 🌀 **Mobility = 0**

The virus is in complete anabiosis. No metabolism, no respiration, no resource consumption. By itself it is static, like a crystal. Movement is provided by the external environment: cough, bloodstream, mosquito bite. The virus does not choose a cell — it collides with it randomly, and only the precise tuning of receptors decides the outcome.

Conclusion: Virus = pure 📄 (code) in an envelope. It does not live — it waits for a host.

Mechanics of capture: the virus's Turbine

◆ 1. 💎 Accumulation of code

The virus accumulates in the environment (saliva droplets, blood, surfaces). Outside the cell it is inactive — pure potential. Its energy is frozen in the chemical bonds of RNA/DNA.

◆ 2. 🔍 Search for a port

The virus finds a receptor on the host cell membrane. The key (capsid protein) fits the lock (receptor) with high specificity. This is not chance — it is the result of an evolutionary arms race. HIV uses the CD4 receptor on T-helper cells. Influenza uses sialic acid on respiratory epithelium.

◆ 3. 💉 Injection of code

The virus injects its 🦠 (RNA or DNA) into the cell. The cellular machinery does not recognise the threat — foreign code looks like its own. This is classic hacking: the code is implanted, the cell suspects nothing.

◆ 4. 🏴‍☠️ Hijacking the Turbine

Ribosomes, enzymes, the cell's energy stations begin to execute the viral code. The cell switches its 🌀 and 🦋 to the production of viral proteins and genome copies. One virion per cycle generates up to 10^4 new copies — a cascade synthesis.

◆ 5. 🚪 Exit and replication

The cell fills with virions, loses structure (🦋 collapses), bursts or pushes viruses out via exocytosis. The cycle is complete — and thousands of new info-objects set out to find the next hosts.

Arms race: where the HIV Turbine hits the wall

◆ ♦ Drive: a swarm of variants

HIV reverse transcriptase copies the genome without a proofreader. Each cycle stamps out a swarm of slightly different copies — a quasispecies. This is not a defect, but a weapon: the rate of variant generation is the virus's . While immunity learns to hit today's virus, it is already different.

◆ ✕ Three walls

Drive hits not one dead end, but three at once:

- **Antibodies.** Immunity produces neutralising antibodies against envelope proteins (env). The current variant is recognised and doomed.
- **Combination therapy.** Since 1996, the standard is triple ART: three drugs against different targets at once. A single mutation against one barrier is useless when there are three barriers.
- **Error catastrophe threshold.** The same mutation rate that enables evasion keeps the virus on the very edge: push mutations slightly faster — and the code melts itself, accumulating lethal errors before it can select working ones.

◆ Bypass — and its ceiling

Against antibodies, the virus escapes by env drift: by the time the antibody matures, the quasispecies has changed the key — the blow hits yesterday's virus. Against a single drug — a resistance mutation: M184V confers high resistance to lamivudine. But  is not infinite. Against triple ART, a single mutation does not save: the cost of resistance to one drug often weakens the virus against the others. Against the catastrophe threshold there is no Bypass at all — it is a ceiling inscribed in the very speed. In an untreated host, the virus decimates CD4 T-helper cells, and the body's defence collapses (AIDS). But where all three walls stand together, the Turbine of the reference code stalls for the first time.

The virus as the prototype of all info-predators

◆ Infobiological spec of the virus

- **High mutation rate:** HIV — 1 error per 10^4 nucleotides per cycle. 100,000 times faster than a human cell.
- **Receptor specificity:** precise tuning to a specific cell type.
- **Economy:** minimal code (2,000 nucleotides) — maximum capture efficiency.
- **Asymmetry of attack:** the virus attacks whenever it is ready. The cell defends whenever it can.
- **Self-amplification:** $1 \rightarrow 10^4$ per cycle.

◆ The same algorithm on different substrates

Viral mechanics repeat wherever there is a substrate and code:

- **Financial pyramid:** hack the greed port $\rightarrow$ inject the code "bring five more" $\rightarrow$ hijack the victim's Turbine $\rightarrow$ cascade synthesis of new victims.
 - **Informational virus (fake):** hack the attention port $\rightarrow$ inject the code "this is important, share" $\rightarrow$ hijack the trust Turbine $\rightarrow$ cascade synthesis of reposts.
 - **Ideological virus:** hack the existential anxiety port $\rightarrow$ inject the code "everything is simple, follow the rules" $\rightarrow$ hijack the decision-making Turbine $\rightarrow$ cascade synthesis of adherents.
- 2E:** the substrate changes, the mechanics remain. The virus is the archetype of all info-predators.

🧩 Paradoxes of viruses

Paradox 1

A virus does not live, but reproduces. An idea does not breathe, but spreads. An algorithm does not feel, but controls. Life is not biology, it is the ability to preserve and transmit code.

Paradox 2

A virus mutates faster than any cell — but it has no error-correction mechanism. Its evolution is a blind trial that works only because the rate of variant generation exceeds the rate of rejection.

Paradox 3

The virus has no body, but its evolutionary line is longer than that of humans. We are temporary carriers for code that is older than us.

Paradox 4

A financial pyramid, a neural network and the influenza virus operate on the same spec. 2E: nature does not invent new interfaces for each level — it uses one algorithm for breaching the Perimeter everywhere.

2E Verdict: the virus — the reference i-obj that comes alive and hijacks foreign control

The virus lives in two phases. In the envelope — pure 📄 i-obj: code without metabolism, frozen, waiting for a host. Inside the cell, the same code unfolds and hijacks control of its Turbine, driving it to produce itself. One nucleotide sequence turns out to be both a passive blueprint and an active helmsman.

Its strength — mutation rate — gives a Bypass against any single defence: the antibody always hits yesterday's virus. But the Bypass is not infinite. Triple therapy puts up three walls at once, and the error catastrophe threshold is inscribed in the speed itself: push mutations higher — and the code melts itself. The reference info-object is immortal as a lineage, but even immortality has a ceiling.

2E settles the century-old dispute among biologists: the virus is not an organism, but an algorithm. No body — but a strategy. No metabolism — but evolution. It is the archetype of all info-predators: from financial pyramids to memes and neural networks.

The virus is the prototype. The next hall will show how the same algorithm captures consciousness — memes and cultural codes.



Check Yourself

? Questions to understand the Code

1. HIV mutates at a frequency of 1 error per 10^4 nucleotides per cycle. The human genome is 3.2 billion base pairs. How many mutations would occur in the human genome per division cycle if we applied the same frequency? What does this say about the rate of virus evolution versus human evolution?
2. The virus uses the CD4 receptor on T-helper cells. What happens to its Mobility if the immune system blocks this port? How can the virus Bypass **X** through mutation (🧬)?
3. A financial pyramid and the influenza virus have the same capture algorithm. In which node of the Triad does the victim's collapse occur in each case?

🔧 System Protocols

Protocol "Detecting a hack" (when your system executes foreign code)

Step 1: Find where in your Triad control has been hijacked: which port (receptor) was used for the injection?

Step 2: Stop the cascade synthesis — disable execution of foreign code (refuse automatic response to the signal).

Step 3: Rebuild the Perimeter — close the port, change behaviour so the code cannot take hold.

Protocol "Controlled mutation" (when the environment changes faster than you adapt)

Step 1: Increase the rate of variant generation — deliberately try different tactics.

Step 2: Shorten the testing time — quickly discard failed variants.

Step 3: Lock successful 🧬 (odd cords) — algorithms that worked, and apply them as a reference for the next cycle.

© Hall 3. Memes and Cultural Codes — The Semantic Substrate



«Ideas do not just live in heads. They use heads as transport, and the brain as a factory for producing their copies».

2E-infobiologist

Introduction

1. The ALS Ice Bucket Challenge reaches 17 million people worldwide in 8 weeks and raises \$115 million for ALS research. But it is not just a campaign — it is a parasite-meme that pierced social networks through guilt.

In 1994, Sergey Mavrodi launches MMM. Within two years, the pyramid attracts 5–10 million depositors, promising 1000% annual returns. No product, only pure code: "Everyone brings — you bring." The idea undermined Russia's financial system more than any law.

And the children's clip "Baby Shark" (Pinkfong), uploaded in June 2016, smoulders for three years — and in 2018 explodes through social media challenges. By November 2020, it surpasses "Despacito" and becomes the most viewed video in YouTube history; by January 2022, it is the first to reach 10 billion views. The form is one: a simple melody + a repetitive dance. The result — a capture of parents' neocortex across the planet.

Culture is not creativity. It is a war of memes for neurons. One successful code (MMM) zeros out the savings of millions. Another ("Baby Shark") reflashs children's behaviour within a week. A third (the Communist Manifesto) changes the world map for a century.

The meme as an info-object

◆ Triad of the meme by examples

- 🐟 **Continuity:** 100 chips. The entire meme is a pattern. For "Baby Shark" — it is the melody and choreography. For MMM — it is the slogan "Bring today — receive tomorrow" and ticket-wrappers. For the evangelical sermon (Paul's epistles, 1st century) — it is the algorithm of salvation through redemption, which outlived the Roman Empire.
- 🦷 **Clawtiguity:** 0. No body of its own. Exists only in the carrier: the listener's neurons, MMM's paper tickets, the parchment of the epistles.
- 🐡 **Mobility:** 0. Does not move by itself. Spreads through people. "Baby Shark" flew through social media challenges — exponential growth at its 2018 peak, where each carrier pulls in the next. The ancient Christian meme (Paul of Tarsus, ~50-60 AD) crawled along Mediterranean trade routes at the speed of a foot courier — decades to reach from Antioch to Rome.

◆ Reproduction mechanism: mutation on the fly

Take the poster "Keep Calm and Carry On", issued by the British Ministry of Information in 1939 in a print run of 2.5 million copies. It was hardly used during the war. In 2000, a bookseller finds it in Northumberland — and the meme resurrects. A cascade of mutations begins: "Keep Calm and Drink Tea", "Keep Calm and Kill Zombies", "Stay Calm and...". Each act of redesign is a mutation with loss of fidelity, but a gain in adaptability to a new Room (internet forums, meme generators).

- **Copying:** a quote from Martin Luther King's speech "I have a dream" (1963) — transmitted almost unchanged for 60 years.
- **Interpretation:** "Baby Shark" in children's retelling — the melody is the same, the words slip, the choreography simplifies.
- **Transformation:** MMM in 1994 — a financial wrapper. In 2014, the same mechanics is repackaged into the crypto-pyramid OneCoin (Ruja Ignatova, \$4 billion in damage) — the substrate changed, the capture invariant remained the same.

◆ Culture as an ecosystem: battlefield of codes

In 1848, Marx and Engels publish the "Manifesto of the Communist Party" in a print run of about 1,000 copies. By 1917, this meme, having survived editions, repackagings (Lenin, Trotsky) and harsh censorship, captures a huge country. Why? Because it competed with other memes (anarchism, populism, monarchism) under conditions of substrate exhaustion (World War I). The meme that offered the simplest 🔄-Bypass ("Land to the peasants, factories to the workers") displaced more complex constructs. Culture is an environment of selection, not a museum. Languages (Latin, English), laws (Roman law, Napoleonic code), brands (Coca-Cola, 1886) — all are memetic species, competing for the time and loyalty of carriers.

Mechanics of capture: the Turbine of a meme (from gospel to pyramid)

◆ 1. 💎 Accumulation of potential in the environment

The meme must enter consciousness through a vulnerability port. 1994 — the collapse of the USSR, hyperinflation, devaluation of savings. MMM said: "Your money will die. Give it to me — I will multiply it." Fear of the future — an ideal port. Red Santa existed long before Coca-Cola (Thomas Nast, 1870s; magazine illustrations of the 1900s). In 1931, Haddon Sundblom does not invent him, but transplants an existing meme onto the brand carrier — attaches it to the emotion of Christmas and distributes it in millions of copies. The meme is not created, but captured and replicated on a new substrate until it reaches the saturation threshold.

◆ 2. ✕ Dead end of recognition (Perimeter failure)

Man does not distinguish foreign code from his own. The MMM depositor thinks: "I decided to earn money." In fact, he executed the meme's instruction "bring and call others". Critical thinking is the protective 🛡-perimeter, but the meme bypasses it through authority ("Mavrodi is a genius") or through conformism ("the neighbour already bought a dacha"). In the case of "Baby Shark", the parent's brain dead end is fatigue: to avoid listening to the child's screaming, he plays the clip. The meme hijacks the decision before the rational filter kicks in.

◆ 3. 🌀 Bypass of immunity (three tactics)

The meme always finds a loophole. Paul (apostle, 50s) bypassed the immunity of Judaism by declaring that salvation comes not through the law but through faith — this lowered the entry threshold for Gentiles. Lenin (1917) bypassed orthodox Marxism with the thesis "Imperialism is the highest stage of capitalism", justifying the seizure of power in a backward country. MMM bypassed financial literacy through simple arithmetic: "Bring 10,000 — in a month you get 15,000" — the brain calculates quickly, it does not calculate compound interest and emission at all. The main 🌀 is speed: postpone the thought for a second, and you are already inside.

◆ 4. Cascade synthesis and culmination

The infected carrier passes the meme to the next. For "Baby Shark", each new parent creates a new view. For MMM, each depositor pulls in new ones — this gives geometric growth. In 1994, MMM covers dozens of cities in months. By November 2020, "Baby Shark" overtakes "Despacito" and becomes the most viewed video in YouTube history. The meme ceases to be code and becomes statistics: billions of views are billions of times a foreign pattern saddled a neuron.

Typology of memes: from Pasteur to Mavrodi

◆ Symbiont memes (beneficial)

Louis Pasteur's microbiology (1860s) — a meme that replaced "miasmas" with "microbes". It requires effort to study (cost in 🦋), but pays off with reduced mortality (gain in 🦋). Vaccination is a meme that increases the carrier's fitness. Its competitors (anti-vaxxers) are defective copies that have not passed the test of reality.

◆ Parasite memes (capture without return)

MMM (1994) and OneCoin (2014) — classic. The carrier loses money, time, reputation. The meme gains spread. Ideologies like Nazism (Hitler, 1933, "Mein Kampf") also work as parasites: they reflash the carrier so that he sacrifices his life for someone else's code.

◆ Commensal memes (neutral load)

"Baby Shark" (2016) does not kill and does not cure. It merely occupies space in memory. 14 billion views — that's 14 billion times the brain overwrote this rhythm, gaining neither benefit nor harm. Earworms (songs stuck in the head) — the same class.

◆ Adapter memes (meta-code)

English as a global lingua franca (spread through the British Empire and American software) — a meme that opens access to other memes. The scientific method (Popper, 1934) — an adapter that teaches the brain to filter pseudoscience. This is a vaccination that raises the entry threshold for parasites.

🧩 Paradoxes of memes

Paradox 1

Ideas use people for their reproduction, not the other way around. 2E: if you think you are the master of an idea — you are already captured. You do not choose memes — memes choose you through your vulnerabilities.

Paradox 2

Memes are not "like genes". Memes are the next level of life. Dawkins described the mechanism. 2E describes the essence. Genes live in bodies. Memes live in heads. Both evolve, but memes — faster.

Paradox 3

Culture is not a product of man, but a habitat of memes. We think we create culture. In fact, culture is a war of memes for carriers. We are not creators — we are a battlefield, where hundreds of codes win or lose every day.

Paradox 4

The most tenacious meme is the one that makes the carrier defend it at the cost of their own chips. Religion, ideology, brand — all these are parasite-memes that reflash the host so that he is ready to sacrifice time, money, health, and even life for their spread.

2E Verdict: the meme is an i-obj that does not tolerate refusal

17 million people in 8 weeks (ALS), 14 billion views (Baby Shark), 10 million MMM depositors, 2.5 million "Keep Calm" posters that rose from the grave after 60 years. The numbers do not lie: the meme accelerates faster than a biological virus because its substrate is not proteins and RNA, but ready-made human neural networks.

2E shows: the meme is pure 🖐️ (100 chips) that has no 🦀 or 🌀 of its own, but hijacks them from the host through ✖️ recognition failure. A successful meme (Marx/Lenin, Pasteur, Mavrodi) always finds a 🧠 for the specific Room: hunger, fear, curiosity, fatigue.

He who controls this copying factory controls culture. And therefore — the economy, politics, and mass consciousness. The meme does not live in you. The meme lives through you. Until you see it as foreign code — you are its carrier, not its master.

💎✖️🧠 (pattern accumulates in the environment → brain Perimeter does not distinguish foreign from own → meme bypasses the filter through emotion or repetition)

Check Yourself

? Questions to understand the Code

1. "Baby Shark" was uploaded in June 2016 and reached 10 billion views in January 2022 — almost 5.5 years. Estimate the average rate ($\approx 10^{10}$ views / ~ 2000 days ≈ 5 million per day) and explain why the growth curve breaks downward at later stages, although the meme's form did not change. Which axis of the Triad (🦀, 🌊 or 🐟) sets a physical ceiling on growth?
2. In 1994, MMM promised 1000% annual returns. If a depositor put in 1000 roubles and received 2000 after a month (100% per month), why was this a structurally inevitable collapse, and not just "aggressive marketing"? Apply the Turbine mechanics (💎 accumulation $\rightarrow$ ✗ no product $\rightarrow$ 🪄 deception).
3. A symbiont meme (the scientific method) requires high energy expenditure from the carrier for learning. A parasite meme (astrology) requires nothing. Why, in a competitive environment, do parasites often win despite the lack of benefit? Describe through the distribution of the carrier's 100 attention chips.

🔧 System Protocols

Protocol "Audit of memetic load" (when a belief sounds "obvious")

Step 1: Recall the moment you first heard this idea. Who was the author? (Pasteur, Mavrodi, Marx, an advertising slogan).

Step 2: Check whether the idea changes your behaviour in favour of the one who spreads it (do you spend money, time, change plans).

Step 3: If in the chain "idea $\rightarrow$ benefit" there is no benefit for you — stop retransmission immediately.

Protocol "Immunity against repetition" (when the same meme appears more than 2 times a day)

Step 1: Consciously change the wording of the meme when transmitting ("not Keep Calm, but Plan Ahead") to break the exact copy.

Step 2: Delay your response by 5 seconds. This breaks the automatic cascade synthesis (turns the carrier from a transmitter into a filter).

Step 3: Replace the emotional assessment ("this is cool/scary") with a structural question: "Which axis (🦀, 🌊, 🐟) gains from me repeating this?" If only the meme's 🐟 gains — it is a parasite.