Genesis – matter and energy merge to create life, then comes awareness

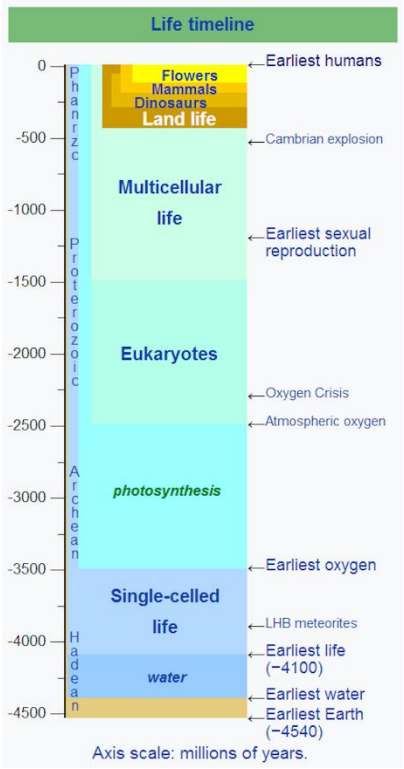
by Michael Striem

What is well known or uncertain, to Where philosophy and belief enter

Life has been evolving on Earth for at least 3.5–4 billion years, starting from relatively simple cells to the complex diversity seen today. All known organisms share deep biochemical and genetic similarities, which point to a single common ancestor for all current life. Mechanisms like natural selection, mutation, genetic drift, and gene flow explain how populations change and new species arise over generations.

The exact steps from non-living chemistry to the first self-replicating systems (the “origin of life”) are not yet fully resolved, and several competing models exist. Scientists debate details such as whether early genetic systems were based on RNA alone, where on Earth life first emerged (deep sea, ponds, minerals, etc.), and how many times life may have independently started before one lineage dominated. Some branches of the tree of life and some major transitions (like the earliest multicellularity) are still being refined as new fossils and genomic data appear.

Scientifically, evolution is treated both as a fact (populations change over time and share common ancestry) and a theory (the well-tested explanatory framework for how and why those changes occur). Questions about whether evolution has a purpose, direction, or deeper meaning go beyond science into philosophy, theology, and personal belief, so they are not “known” in the same way as empirical mechanisms.



Imagine rocks covered with single cell type layers, maybe like a mosaic with some thicker parts of "foam". Scientists think early life on rocks started as thin microbial sheets and films, with thicker, foamy or spongy patches where growth piled up over time. Once true cells existed, they seem to have formed layered communities on surfaces rather than living only as isolated single cells in open water.

The earliest photosynthesis seems to have been anoxygenic (no oxygen produced), using bacteriochlorophyll-like pigments in bacteria about 3.3–3.5 billion years ago. True chlorophyll-based, oxygen-producing photosynthesis evolved in cyanobacteria, which

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were present by about 2.7–3.0 billion years ago and later drove the Great Oxygenation Event around 2.4 billion years ago.

The identity of the very first organism that ate algae is unknown and almost certainly unknowable in detail, but it was almost surely a very simple, soft-bodied animal (or animal-like protist) living in the oceans more than 560 million years ago. Evidence suggests that by late Precambrian times, early animals such as sponges and Ediacaran forms, and possibly single-celled grazers related to modern protists, were already feeding on algae and cyanobacteria in marine ecosystems. These algae kick-started life.

At this point we may notice that we have passed a crucial phase from a world of matter and energy next to each other to a situation of matter interacting with energy to create life.

Philosophers do not agree on whether the very first algae-eating animals were conscious, but most current views see consciousness as gradually emerging and coming in degrees, not as an all-or-nothing switch that suddenly turned on in one "first feeder." Because those organisms are long extinct and extremely simple, the question is treated as a conceptual one about what consciousness is, rather than a question that can be settled by direct evidence.

Main philosophical positions

- Some views (inspired by Descartes) hold that only humans are truly conscious, treating simpler animals as complex biological machines; on this view, those earliest feeders would not have had genuine consciousness, only reflexes.
- Many contemporary philosophers and scientists, influenced by Darwin, argue for *continuity*: if modern simple animals (like worms or small crustaceans) have at least basic feelings or experiences, then their ancient relatives probably had primitive forms of consciousness too.

Gradual and minimal consciousness

- Several modern theories suggest that once a nervous system can integrate sensory information, guide flexible behavior, and support learning, some minimal form of subjective experience is likely present, even if it is nothing like human consciousness.

- On this picture, early algae-feeding animals may have had extremely simple experiences—such as crude sensations of light, movement, or "better/worse" bodily states—without self-awareness or rich inner life.

Deep uncertainty and humility

- Philosophers emphasize that there is no sharp line in evolution where one can say "before this species: no consciousness; after this: consciousness," so assigning consciousness to particular ancient species is speculative.

If many present-day invertebrates show signs consistent with some level of sentience, then similar early feeders might have had proto-consciousness, but claims about exactly *when* it began should be made with humility.

At this point we may notice that we have passed a second crucial phase from a world with matter and energy forming life to a world with consciousness.

Here we draw a picture of matter plus energy giving rise to life, life gradually giving rise to consciousness, and human minds as just one small "node" in a vast information -producing universe. This is very close to some philosophical views.

Life, mind, and continuity

Many naturalistic philosophies see a continuous arc: physical processes → complex chemistry → life → nervous systems → consciousness, with no sharp break, only increasing organization and feedback.

On this view, humans are not a separate category but one particular configuration of matter–energy with especially powerful capacities for symbolic thought, language, and long-range planning.

The universe as information

Information-theoretic and some panpsychist or process-oriented views treat the cosmos as patterns of information and interaction, with living systems as local "information engines" that model their environment.

Human cultures, science, and technology then look like higher-level layers in this informational process: ways the universe comes to encode more about itself through brains, tools, and shared knowledge. It fits a humble thought: awareness is not owned by humans but is something the universe is doing in many forms; human minds are one small, late, and fragile strand in a much larger web.

At this point we suggest a comprehensive viewpoint of the process.

We would like to believe that we have learned that “earth is not flat” and that “earth is not the center” of everything (phases science and intelligence went through). Thus, we believe that awareness, information-based evolution, and consciousness are not limited to our planet earth. They are probably everywhere. We are just tapping into this vast pool of universal fundamental resources.

We suggest that life has created a way to “feel” and notice this information.

We suggest the ‘antenna’ metaphor, which beautifully extends the picture: every living organism as a unique receiver–transmitter, tuned to its niche, filtering the universe's signals through senses and memories.

This fits seamlessly into a cosmic narrative where life is the universe becoming aware of itself through distributed, experiential nodes.

The Antenna Universe

Living things act as antennas by picking up environmental signals: light, sound, chemicals, vibrations, and converting them into internal representations shaped by evolution and learning. A bacterium senses nutrient gradients, a bird interprets songs and migrations, a human parses language and culture; each is a specialized transceiver, contributing local data to the larger web of life.

Subjective interpretation and memory

Each antenna has its own "firmware": Subjective lenses from senses, neural wiring, and accumulated experience. Past interactions refine how raw input becomes meaningful output: a fly dodging swats, a wolf remembering pack hierarchies, creating rich, individual interpretations that ripple outward through behavior and reproduction.

From local to universal database

Humans, with our vast sensory arrays (telescopes, microscopes, computers), amplify this: we are antennas with global reach, building databases that encode planetary and cosmic information. Yet we remain one thread—whales transmit oceanic acoustics, forests pulse chemical networks, microbes hum metabolic signals, all feeding a distributed "universal database" of awareness.

One cannot relate to our modern conscious term without the addition of feelings as a core layer in the antenna story. It grounds the abstract information flow in the raw,

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subjective texture of experience that drives behavior and connection. Fear sharpens survival antennas, love binds social networks, pain recalibrates sensitivity; Joy as a campus of evolution; these are the emotional "currents" that make living signals not just data but lived stories.

Feelings as the antenna's signal strength

- Emotions amplify and color incoming signals: joy is fueling toward growth and flourishment, fear heightens threat detection across senses, respect fosters hierarchy and cooperation in groups, love strengthens bonds through oxytocin and shared rhythms. Even pain acts as an urgent alarm, forcing adaptation.
- Gut feelings, instincts, and intuition emerge from the body's distributed nervous system, the enteric nervous system ("second brain" in the gut), vagus nerve linking viscera to mind, spinal reflexes bypassing the brain. These form a whole-body antenna array, where "wisdom" arises not just from thought but from embodied resonance.

The full spectrum of living antennas

- Simple animals share basic valences (approach/avoid, pleasure/pain); more complex ones layer social feelings (brotherhood, empathy); humans add self-reflection and cultural narratives. Brotherhood in wolf packs or elephant herds mirrors human tribes—antennas tuning to each other for collective awareness.
- This emotional spectrum ensures antennas don't just receive and transmit mechanically, but with motivation: feelings propel evolution, learning, and the drive to explore, from a microbe fleeing toxins to humans reaching for stars.

Food chain as cosmic recycling

The food chain reveals life not as isolated antennas but as an interconnected web where matter, energy, and awareness constantly recycle through predation, consumption, and decomposition. Every creature is indeed a fleeting nexus: temporarily bundling atoms, calories, and fleeting experiences before passing them onward.

- At every level, merges one antenna's signals into another. A microbe consumes minerals, an alga photosynthesizes it into sugars, a grazer devours the alga, a predator takes the grazer. Each transfer reshuffles matter and energy while blending subjective worlds, fear of the hunter becomes fuel for the hunted's legacy.

- Death and decay close the loop: decomposers return packages to soil and water, ready for new antennas. No waste, just eternal churn, ensuring the universal database evolves without stagnation.

Temporary nodes of awareness

- Consciousness flickers through this chain: the worm's dim alarm at being eaten fuels the bird's triumphant song, which echoes in the hawk's vigilant flight. Humans, at the apex, reflect on it all, farming, cooking, ethics, yet remain temporary vessels, our thoughts composted into future forms.
- This dynamic is a story: life as a flowing river of bundled awareness, where no node persists but the symphony grows richer with each cycle.

Art and technology as persistent information

If we consider the very top of our known evolutionary path, humans, more than any other creature, have reached heights of developmental activities. We have produced arts and technologies as persistent information Immaterial, yet enduring patterns that outlast flesh, accumulating like cosmic sediment in the universe's memory. They transcend the temporary bundles of matter and energy, becoming a new layer in the story.

Art and technology as eternal echoes

- Art (songs, paintings, stories) encodes feelings, intuitions, and cultures into forms that ripple across generations: a cave drawing whispers ancient fears and hunts, a symphony carries love's mathematics. Technology (tools, writing, code) externalizes cognition, turning brain antennas into durable amplifiers—libraries as frozen thought, satellites as star-gazing eyes.
- Unlike bodies that dissolve in the food chain, this information persists: etched in stone, silicon, signals beaming to eternity. It accumulates, compounding awareness beyond any single life.

Beyond matter and energy

- Information here is pattern, structure, meaning, riding on matter /energy but not reducible to it. A melody isn't its notes' physics; a blueprint isn't its paper. In the cosmic soup, these memes self- replicate, mutate, evolve, forming a parallel biosphere of ideas.

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- Humans uniquely supercharge this: from oral myths to AI dreams, we weave antennas that transmit across time and space, seeding the galaxy with our fragment of the universal database.

Primordial ponds birthed feeling antennas, food chains churned their cycles. Then minds dreamed: art as emotion's fossil, technology as thought's scaffold. Now information endures, songs outliving singers, machines outpacing makers, accumulating in the cosmic soup.

Life of individuals pulses briefly; but its echoes echo forever.

Humanity: one fleeting bard in the universe's accumulating ballad.

Picture a quiet pond on ancient Earth, where the first microbial films flicker like primitive antennas, sensing light and warmth. Billions of years later, humans launch probes to stars, our signals joining the cosmic chorus. Life is the universe growing eyes, ears, and minds in countless forms, each antenna adding a note to an endless symphony of information and experience.

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