

Intelligent Evolution

A 21st Century Creation Myth

I'm trying to develop a comprehensive theory of Evolution that goes beyond earth-bound biology and life to the beginnings and ends of the universe. With that same goal in mind, some Creationists believe that the cosmos we know and love was intelligently designed at a specific point in history, then carefully nudged and nurtured (rewarded & punished) to this day. But then most Evolutionists have concluded that it is eternal and aimless, so it just accidentally happened to randomly-develop "laws" leading to the evolution of life and intelligent beings, for no particular reason. My own personal hypothesis though, is a blend of both views that I call "Intelligent Evolution". This open-ended essay is not intended to present a scientific theory, but merely the kernel of a modern myth based on a 21st Century worldview. Please bear with me then, as we enter the twilight zone where science and myth merge.

As a consequence of my informal layman's study of cutting-edge science—Quantum Theory, String Theory, Chaos theory, Complexity theory, Information theory, Emergence Theory, Near-Equilibrium Thermodynamics, and Big-Bang Cosmology, to name a few—I have concluded that the universe is not eternal, as I and most early 20th century scientists had assumed without evidence. Astronomy and cosmology currently paint a detailed picture of a cosmic explosion from a tiny "singularity", followed by a magical flash of instantaneous "inflation" to cosmic dimensions. The energy and matter from that blast-in-the-past are now expanding at incredible speed toward oblivion in "heat death". It has been said that energy cannot be destroyed, yet it will eventually and certainly fade away into nothingness. So it seems that evil, world-destroying entropy wins in the end. Or does it?

If the physical universe is not eternal, then the various speculative "multi-verse" and "many worlds" theories cannot explain the brute fact of our temporal existence. Instead,



Cosmos is the universe regarded as an orderly, harmonious whole. The size and age of the cosmos are beyond human understanding. Lost somewhere between immensity and eternity is our tiny planetary home. In the last few centuries we have made some of the most astonishing and unexpected discoveries about the cosmos and our place within it - explorations that are exhilarating to consider. They remind us that humans have evolved to wonder, that understanding is joy, that knowledge is a pre-requisite to survival.

—TechFest '06

we must devise a theory that accounts for the finite beginning and formless end envisioned by the experts. We must also explain the inverse relationship between creative Energy and destructive Entropy. If the universe is finite and temporal, then we can only account for its existence as a fantastically improbable accident: "Poof! A world appears from nowhere, for no reason". Or we can posit a hypothetical "First Cause" just to get the chain of cause and effect started.

Traditionally the uncaused "Prime Mover" has been imagined as an eternal being composed, not of Matter, but of Mind (AKA "spirit"). Ancient and modern philosophers have reasoned that, since matter and energy are bound-up in finite space and ticking time, only an immaterial substance, such as Mind or Consciousness, can be eternal and infinite.

Just as our metaphysical minds emerge from the operations of a physical brain, my hypothesis assumes that the material world somehow emerged from the evolutionary operations (imagination) of a dis-embodied Mind. That statement wouldn't sound quite so fantastic if you were familiar with the perplexed conclusion of some Quantum scientists that the sub-atomic-level constituents of matter appear to be made of nothing more substantial than "Information", such as Mathematical ratios. Consider that Consciousness is not a material object, but an invisible process or function, and a "force" to be reckoned with. "Mind" is not physical, but metaphysical. Metaphysics encompasses whatever cannot be perceived by the physical senses, but only by the mental "senses". Metaphysics is ideas, qualities, patterns, relationships, universal concepts, principles, and so-on, which we accept as normal, if somehow unreal. Mental reality then, is what we call Ideality. And, even in the hands of puny humans, ideas are the most powerful form of energy in the world. Ideas can move mountains and change history, so it may not be too far-fetched to assume that cosmic-scale ideas can create worlds.

“Let there be life”



As far as I can tell, the only thing in this world that fits the requirements for a creative force is Information. Info Theory says that the physical dots and bits of data that our senses detect are only the carrier, not the content of information. What we mean by “information” is not the material stuff, but the invisible, intelligible patterns that we infer from physical relationships. The meaning is not in the things, but in their relations. An idea can take many physical forms, but in the mind it must be converted back into a non-physical pattern. As an exercise, picture a pattern of 5 dots on a sheet of paper. Now take away the paper and the dots of ink. Can you still “see” the pattern in your mind? That dot-relationship diagram is now embodied as an abstract idea, and stored as elements of chemical memory in various places around your brain. But your consciousness can reconstitute that distributed pattern into a coherent virtual reality, composed, not of mundane matter, but of shape-shifting information.

If the creative First Cause is neither aimless-energy nor malleable-matter, then perhaps it is the design concept—the idea of a world—that is embodied within them. I envision the creative power of God as a carrier wave of proto-energy with “information” superimposed on it. Everything in creation is ultimately composed of oscillations between existence and non-existence, symbolized by ones and zeros—the same binary bits that serve as data for computers. That in-formed or programmed Energy then carries the design intent of the Creator into the world, as waves and particles of matter, and the invisible forces that bind them together into recognizable patterns. The higher wave frequencies carry more information density. These vibrations in space are like music, they create perceptible differences by variations in pitch. Tightly-compressed, short-wave vibrations are what we call energy. As energy unwinds, it slows down, it turns into looser, long-wave matter, and eventually back into very long-wave heat energy. When nothing is left of the original information, the remainder is pure carrier wave. The ability to imprint information onto raw power is what I call “In-Form-Ation”. Like DNA, it creates the forms that we know via our senses and understand with our minds.

To sum up, God—made of meta-physical mind-stuff—thinks of a concept, purpose, goal, design, such as: “let’s make a world”. The design-intent (In-Form-Ation) programs Energy, which then evolves into matter, and eventually degrades into entropy, which just fades away into next-to-nothingness. At that point only God—the only constant, everything else evolves—can recycle the diluted energy back into In-Form-Ation. In that event, matter and energy are conserved, and perhaps—just perhaps—any accumulated human minds or souls would be saved as interest on the initial investment. Now let’s put that bizarre speculation into metaphorical, mythical form, and see if it makes any sense, scientifically or otherwise.

The Conception of a Universe

In the beginning, the singularity-that-went-bang was, metaphorically, a world-seed or fertilized egg. Like *Prego* spaghetti sauce, whatever was needed to produce the best results was already “in there” before the container was opened. No divine intervention was necessary to adjust or fine-tune the unfolding of the universe to get it “just right”. The design intent was completely conceived by the Great Architect before the actual construction began (pardon the mixed metaphors). However, such a perfect, all-things-considered cosmos-seed seems to imply and require a pre-existing seed-maker. Even an all-encompassing universe like ours though seems to logically require that the world-maker is not “in here” with the ingredients, but “out there” in the great beyond.

The Magic Chef, who cooked-up our little creation, was, by all accounts, a god of some kind. However, for the sake of accuracy and simplicity, I prefer to refer to the office of First Cause by the technical term “Creator”. Of course, you may address this invisible and inconceivable majesty as the Great Flying Spaghetti Monster, if it suits you. Since the Creator is not actually *in* the creation though, we can’t get to know Him-Her-It in the usual way. Hence, we can only know the Artiste indirectly through *He/r magnum opus: Le Nature*. So far, this generic God-concept is more compatible with the philosophy of Deism, than with Mono-Theism, Poly-Theism, or Pan-Theism. So I will accept that philoso-

phical label, for convenience, to describe my personal, idiosyncratic, worldview. And, since the un-created Creator could have no flesh & blood gender-as-we-know-it, I have coined the deliberately ambiguous pronouns, “S/he” and “He/r”, for convenience—and to be provocative.

Obviously, any attempt to conceive of such a meta-physical, outside-the-box Creator is brain-warping—like trying to visualize a 12 dimensional object with a four-dimensional brain. Therefore, following the example of science, I will ignore the confounding complexities, and focus only on the broad outlines and the simpler elements of existence. In this little myth of how-things-came-to-be, I will turn my attention to an attempt to construct a science-fiction portrait of the invisible Deity’s shadow, based on the accidental glimpses of god-spoor we get from the godless-gropings of Science. Hopefully, we can come to know the mind of God as it is reflected in the forms and colors and brush-strokes of He/r masterpiece of the creative arts: the one-and-only-world that we exist, and consist, in.

The way I picture the act of creation is less like Genesis, and more like gestation. If the eternal deity was All and One, then there was only one place to put a new world: on the inside—within the womb of God, so to speak. Metaphorically, our hermaphrodite deity fertilized He/rself and conceived a cosmos. Hence, you could affectionately call He/r “Mother Nature”. Everything that would eventually emerge from that original conception was in the zygote—the sperm-seed. But how could a knocked-up Creator cram a whole, physical universe into a tiny speck of fairy dust? Easy, the things we now know were not “in-there” in their final pre-destined form. Instead, the objects and processes of our world were embedded-in-the-seed in potential form, ready to emerge into actuality whenever evolutionary pressures found a new niche to fill. Just as fluid, formless cement hardens into rigid concrete, Potential solidifies into Actual.

That statement may need a bit of explanation, so I will digress for a moment. “Potential” is statistical, not specific. Like *potential* energy, we know it is “in-there” but



If you want to make an apple pie from scratch, you must first create the universe.

—Carl Sagan

we can’t measure it until it is manifested as *actual* energy. As I imagine the procedure, the Creator placed nothing but a program of creative energy, called “In-Form-Ation”, in the seed. IFA is analogous to the fruitful data patterns of DNA (software); except that it also creates the energy and matter (power and hardware) that it gives form to. Now this plenipotent IFA is not the ordinary information that you are thinking of. Instead the IFA concept is derived from the

science of Information Theory, wherein “information” is any meaningful pattern that can communicate an idea to a mind. Fortunately, the highly-evolved human brain is a pattern-seeking machine *par excellance*.

Thus, “In-Form-Ation” is my term for the magic power of gods (the Word, the demi-urge), which creates something out of nothing. And yet, it’s perfectly natural, because ultimately it is the program for Nature-as-we-know-it. As another mental exercise, try to envision IFA as energetic oscillations in empty space, analogous to “quantum foam”—fluctuations between bare existence and non-existence (Got it?). Now you see it, now you don’t! OK, those vibrations you see in your mind’s eye are like the mass-less, one-dimensional threads of String Theory. The force and frequency of their two-dimensional tremblings cause Energy and Matter to condense out of Space and Time. (Don’t ask me how this works, I just report what the theorists theorize) In this analogy, matter is simply a slower form of energy, but everything vibrates. Essentially, vibration is simply alternation between two extremes: something or nothing, one or zero*. The short-pitch, high-energy, electro-magnetic spectrum of wave-lengths extends seamlessly right on down into the long-pitch, low-energy, material spectrum. Light is dynamic and super-fast, while rocks are dumb and slow. Get the picture?

Now, if the Great Mathematician put a self-perpetuating program (no matter, just mind-stuff) into the singularity-seed, everything that happens after the bang is simply the repetitive, recursive calculation of the algorithmic-logic (necessity, or law) processing

numerical-values (contingencies or angular relationships). For example, I once had a DOS-based software application that produced beautiful Fractal designs from the interaction of a simple feedback-formula, such as $\sqrt{1} * N+1 = X$, with my randomly-assigned variables. The output was an almost infinite array of bizarre, novel-but-replicated forms and shapes on the screen. So, once the Creator's algorithm was set in motion, it began to spin-out-of-chaos an endless array of new and different combinations of matter and energy. The ultimate result of that mind-numbing, number-crunching is the ordinary stuff you see around you: Vibrating-space masquerading as electrons and protons, light and dirt. From such a mechanical, clock-work process, we get the unpredictable adventure called Evolution. We go from mental-concept to actual-concrete. This heuristic (searching) procedure is boringly-simple and routinely-repetitive computing, but the outcome is the fascinating variety of forms in the wonderful world of so-called Reality.



now searching for their roots—the origins and purpose of our existence. Toward that end, we vainly strive to conceive of our Maker. But, being creatures of temporal mind and physical body, we have no choice but to imagine an infinite, eternal Creator in our own image. Hi Mom!

The Birth of a Universe

If there is any truth to these conjectures, what does it all mean for mankind and for me, personally? Since the Creator has not confided He/r intentions to me, all I can do is speculate. My first question is why would a perfect and complete (as implied by eternity and infinity) entity bother to do anything? Perhaps an eternal Being must be creative in order to avoid infinite boredom. Maybe S/he wanted to see what would happen if lesser beings were given limited intelligence and autonomy. Could this world be like a computer simulation game with little avatars running around making limited choices with their own limited goals in mind? An entity with self-awareness is a causal agent. It can modify the course of nature (determinism) to suit its own purposes (freewill). Put a lot of autonomous free-agents together and they can have a significant impact on the “destiny” of evolution. We can change the world, for better or worse. But are we really free? Are the sons-of-God little creators in their own right?

If this universe is actually something like a developing god-fetus, then perhaps we can look forward to being born into the heavenly world of our Great Mother. Right now, we can only know the womb that provides warmth and sustenance for our survival. But after we reach a level of wisdom and competence, where we can survive in the outer world, the illusory, physical world will dissolve away and we will see things as they really are: meta-physical. And then, instead of imagining and speculating, we will see God face-to-face!

But that's just one possible scenario, and I wouldn't put too much stock in it. For now, we see in a glass darkly, as the apostle Paul put it. So how can we use this updated, but still fictional, myth in the mundane here-and-now? I suppose we can do what all human societies have done before us: use the myth as

You could call this paradoxical process “Creation out of Chaos”**, or “Freedom within Determinism” or “Random Chance within Logical Destiny”. I also call it Intelligent Evolution. The Creator in my story didn't simply say “let there be light”. Instead, S/he arduously conceived (mentally and physically) a fetus full of potential, which is now growing and flourishing into heaven-knows-what. Unlike Adam, this creature was not fully-developed from the beginning, but is gradually evolving, phase by phase, into something completely different from the undifferentiated egg. New and more complex features and forms are emerging from the creative-complexity of exciting-energy and morphing-matter. This evolutionary process is not just a blind-groping-in-the-dark, though. The random search is guided by selection rules that increase local order and complexity at the expense of environmental disorder. More and more efficient energy-utilizers arise and replicate. Not surprisingly, considering the source, this on-going struggle between creative-energy and destructive-entropy produces local pockets of ordered-information. Eventually, it has produced a family of intelligent beings who are

** Chaos is the abyss of possibilities inherent in eternity.

a map to guide us through the wilderness of the world. Religions have always used the current understandings of philosophy and science to help them to cope with the fears and uncertainties of the world, and to minister to the needs of human nature, and to give them some hope for a better world tomorrow. Unfortunately, humans seem to have a tendency to cling to these just-so stories as-if they were really true. Religions have historically fossilized around an antique world-view, which is taken to be more true than any new-fangled notions of science. But a map is not the territory. And maps quickly become outdated. So consider this story of Intelligent Evolution to be merely an update to older scriptural and scientific paradigms.

According to the apocryphal story of Intelligent Evolution, the initial act of Creation only established the potential for life, not the particulars. In the on-going creative process of emergence, order (regularity) arises from disorder (randomness) only because chaos includes a statistical chance of reaching intermediate stable states. Even chaos has laws, limits, and constraints. Everything in the universe is pre-determined, but only in a statistical sense. The particles of matter are free to interact in various ways, limited only by the "laws" of physics. The general trend and destination was set from the start, but the exact route was left open to chance. For example, a race of intelligent animals was fore-ordained, but unique little "You" was a fluke. It's as if the Creator gave a general command, "let there be life, but you work-out the details amongst yourselves." Our mission, should we choose to accept it, is to work-out the details of Life, the Universe, and Everything. ☺



*Voila! It's all in there.
Now I can take the rest of
the week off.*

☺ For additional information about the books that inspired and informed the thesis of this essay see the separate **Abridged Bibliography**.
☺ For a brief explanation of uncommon or technical words and concepts referred to or implied in this essay, see the separate **Glossary of Technical Terminology**.