

"Who hath measured the waters in the hollow of His hand, and meted out heaven with the span, and comprehended the dust of the earth in a measure, and weighed the mountains in scales, and the hills in a balance?" (Isaiah 40:12).

January 2002

THE MYSTERY OF COMPLEXITY

by Henry M. Morris*

The universe is full of an infinite variety of complex systems, from the almost incredible universe itself to the tiniest one-celled creature in the ocean. The most intricately involved of all is the human brain which Isaac Asimov once called "the most complex and orderly organization of matter in the universe."

More incredible even than that, however, is the fact that some humans (including Asimov himself) who possess such marvelous brains, with their trillions of inter-connecting electrical circuits, still manage to imagine that the complex human brain arose by chance through mutations and natural selection!

Those of us who believe in the God of the Bible—the personal, omnipotent, omniscient God of creation and redemption—find nothing mysterious at all about the origin of the complex structure of the human brain or any of the great multitude of complex organisms and other complex systems of the world. "Lift up your eyes on high, and behold who hath created these things" (Isaiah 40:26). "The LORD of hosts is His name" (Isaiah 48:2). ". . . the LORD God formed every beast of the field, and every fowl of the air" (Genesis 2:19). As to His method of creation, "He spake, and it was done" (Psalm 33:9). Very simple and clear—if one just believes in God!

The naturalistic creed of most evolutionists, however, requires them to account for complexity naturalistically. Somehow a scenario must be developed showing how a primeval chemical molecule could evolve into a replicating protein, then a complex protozoan, eventually a large beast, and finally a human being with an infinitely complex brain. The increase of complexity involved would seem to be incredible—but it must have happened, they insist, because otherwise God would have done it, and that would be unscientific.

The problem with trying to be scientific, however, is that science doesn't help either. Instead of a process that increases organized complexity, there is a universal scientific law that all natural processes tend to *decrease* complexity in the universe. This is the famous Second Law of Thermodynamics, or law of increasing entropy. It is expressed in various ways, depending on type of situation—decreased energy available, increased randomness and disorganization, garbled transmission of information, etc. Entropy always increases in a closed system, and it always *tends* to increase even in an open system.

In the case of open systems, there must be an influx of energy (or ordering information) into the system from outside in

*Dr. Morris is Founder and President Emeritus of ICR.

order to keep it in equilibrium and for a time to offset the tendency to decay. Eventually it will decay anyway; a man, for example, may keep functioning for many years, but he will finally die. By the same principle, the earth and all its systems could survive, perhaps, for millions of years, but the sun would itself finally burn out and the earth's supply of external energy lost, so the earth and its systems also would all disintegrate and die. In fact, if present processes continue long enough, the universe itself will ultimately die.

How, then, when the whole universe is decaying and dying, struggling hard just to maintain a fragile equilibrium in which living humans and animals can be maintained for a while—how can *evolution* toward higher organized complexity ever take place at all? Well, here is their current best answer:

Thus, once again we conclude that an energy flow through an open system is an absolute necessity if order is to be created from disorder.¹

Yes, but *that* is necessary just to maintain its present order (or better, organized complexity). How can it be increased? How can a population of worms, say, be upgraded into a population of human beings?

Most evolutionists today, when pressed to answer such questions, will say that Ilya Prigogine, with his concept of “dissipative structures” in “far-from-equilibrium” thermodynamics, has provided the answer to the mystery of life's origin. That it does not really do so, however, I have tried to point out in several previous discussions, so will not repeat the discussion here.²

However, the author of a recent book has now taken on the ambitious project of applying the Prigogine approach, not just to the origin of life from non-life, but also to every stage of evolution, from the

evolution of the cosmos to the evolution of social systems. He rather audaciously tries to make the Second Law of Thermodynamics and the dissipation process, with its inevitable increase in entropy, the very generator of evolution and increased complexity.

At all times in the Universe, and at all places, the second law of thermodynamics is the ultimate arbiter of Nature's many varied transactions; it, and the ubiquitous process of energy flow directed by it, embody the underlying physical principle behind the development of all things.³

Chaisson, like Prigogine and other writers, has been able to note certain situations where a sudden increase in “order” in a system has been generated in a part of that system. The special condition required seems to be “fluctuations” in the flow-through of energy under “far-from-equilibrium” conditions in that field of flow. In such unstable conditions, there also is inevitably an abnormally large amount of energy lost to the external environment—hence the name “dissipative structures.”

Prigogine's classic example of such structures was the sudden development of eddies in a liquid surface caused by a flow of heat up from a source of heat at the bottom. These are “ordered” structures, but they are necessarily accompanied by increased dissipation of energy to the environment. Another oft-used example is the tornado, a highly ordered structure generated by flow of heat and/or air in the atmosphere.

Tornadoes are paragons of order through fluctuations. . . . though superbly (and locally) constructed, can be utterly (and globally) destructive. . . .⁴

How such dissipative structures, even if they are maintained indefinitely by the

continuing non-equilibrium thermodynamics of the field of flow, can ever be the base on which higher and still higher degrees of complex structure can be developed is still a mystery which Chaisson does not pretend to solve in his entire book on “cosmic evolution.” He, like Prigogine and other evolutionists, is adept at making broad evolutionary generalizations, but also at avoiding experimental proof.

With the whole universe running down, and with the decay process apparently even hastened by the extra energy loss required to generate increasing complexity, how can the evolutionary process possibly be sustained, all the way from particles to people?

The non-equilibrium dynamics are universally maintained, Chaisson believes—believe it or not—by the expanding of the universe!

The very expansion of the Universe, then, provides the environmental conditions needed to drive order from chaos; the process of cosmic evolution itself generates information.⁵

But saying so doesn't make it so! We would like to see some real scientific evidence that this supposed cosmic process of universal expansion is really generating evolution. But Chaisson only provides wishful thinking.

How that order became manifest specifically in the form of galaxies, stars, planets, and life has not yet been deciphered in detail.⁶

But, even after such a profound understatement, this eminent cosmologist still claims to have developed a thought channel which evolutionists can use to guide their wishful thinking.

We thereby have a means to appreciate in the main, if perhaps not yet

understand the particulars, the observed rise in complexity throughout the eons of cosmic evolution.⁷


He also says his present 274-page book is an “abridgement” of a “larger opus to come” in which all the specific evidences can be given to show just *how*, in detail, an over-all disintegration of complexity in the universe somehow really produces more complex systems all over the universe.

Right now, however, the details are all missing. Chaisson at least does acknowledge that there is much work yet to do before evolutionists will really have a rational explanation of complexity without God.

Our treatment of cosmic evolution set forth in this book is by no means complete or comprehensive, especially regarding the devilish details.⁸

I might respectfully suggest that Dr. Chaisson carefully consider whether the devil is not only in the details but in the whole concept of cosmic evolution, especially the oxymoronic idea of complexity through dissipation and evolution by entropy.

References

1. Eric J. Chaisson, *Cosmic Evolution* (Cambridge, Massachusetts: Harvard University Press, 2001), p. 47.
2. See, for example, *Science and Creation*, volume 2 in *The Modern Creation Trilogy*, by Henry M. Morris and John D. Morris (Master Books, Green Forest, Arkansas, 1996), pp. 150–158.
3. *Cosmic Evolution*, pp. 207–208. The author of this book is a research professor in physics, astronomy, and education at Tufts University.
4. Eric J. Chaisson, op. cit., pp. 62–63.
5. Chaisson, p. 131.
6. Ibid.
7. Ibid.
8. Ibid. 

WHEN DID “SUE,” THE HUGE T-REX, LIVE AND DIE?

by John D. Morris, Ph.D.

Several years ago the skeleton of the largest and most complete Tyrannosaurus Rex was found in South Dakota. Dubbed “Sue,” it eventually found its way to the Chicago Field Museum of Natural History. Evolution thinking dates Sue as having lived and died in the Cretaceous period, approximately 67 million years ago.

In life, Sue must have cast an imposing figure. She stood some 13 feet high at the hip, and measured 42 feet from head to tail. Her five-foot-long skull contained 58 vicious teeth. Some were curved; others serrated like a steak knife. There were some features, however, which suggest she was as much prey as predator, for Sue bore wicked battle scars. During some past encounter, Sue had broken several ribs. In time they had healed over, leaving visible abnormalities. But a subsequent encounter had broken them a second time.

Sue’s skull shows evidence of further misery, for it contained a series of perforations of uncertain origin, due to either an attack or an unknown bone disease or abscess which ate completely through the massive jaw. In either case, Sue’s existence must have been wracked with pain and suffering. Further evidence indicates that she had suffered a broken leg many years before death, which confirms the notion that she lived in abject misery. However, “Sue” lived to a ripe old age, perhaps several hundred miserable years.


The rocks surrounding her bones tell us that her body, fairly intact, was buried in sediments deposited by rapidly moving water. Where and how she died we can’t tell, but the sediments covered her carcass so completely and deeply that scavengers could not reach it.

Advocates of Theistic Evolution, Progressive Creation, the Gap Theory, and the Framework Hypothesis, all contend that Sue lived and fought and suffered and died in a time long before man. It was a brutal time, replete with carnivorous activity, disease and extinction. In this scenario, it was the extinction of the dinosaurs which gave rise to the mammals, and finally man. In other words, God used death to produce man, and at the end of it all, God pronounced it all “very good” (Genesis 1:31).

But according to a straight-forward reading of Scripture there was no death in the beginning, no carnivorous activity, no burial, no fossilization. God had created conscious life to live forever under the wise dominion of His image re-created in man. There was no pain, no suffering. No animal attacks, no infectious diseases, no broken bones. These entered creation after Adam rejected God’s authority over him—he sinned against God, and thus incurred the “wages of sin” for his actions. From then on Adam, his descendants, and all in his dominion, suffered under the penalty and presence of sin in a world no longer “very good.”

So that’s the question. Did Sue live and kill and suffer and die in a world deemed “very good” by the gracious, loving God of Scripture? Or, did these gruesome aspects and activities follow the ruination of the “very good” creation by Adam’s sin and the resultant curse?

Which type of world could God call “very good”? All Christian advocates of an old earth must hold that Sue, her time, and condition predated Adam, and thus was deemed “very good” by God.

Surely some things just can’t be. 



SINGLE COPIES 10¢

ORDER FROM: **INSTITUTE FOR CREATION RESEARCH** © 2002 ALL RIGHTS RESERVED

P.O. BOX 2667, EL CAJON, CA 92021