Thermodynamics Falsifies Evolution

The Second Law of Thermodynamics, which is accepted as one of the basic laws of physics, holds that under normal conditions all systems left on their own tend to become disordered, dispersed, and corrupted in direct relation to the amount of time that passes. Everything, whether living or not, wears out, deteriorates, decays, disintegrates, and is destroyed. This is the absolute end that all beings will face one way or another, and according to the law, the process cannot be avoided.

This is something that all of us have observed. For example if you take a car to a desert and leave it there, you would hardly expect to find it in a better condition when you came back years later. On the contrary, you would see that its tires had gone flat, its windows had been broken, its chassis had rusted, and its engine had stopped working. The same inevitable process holds true for living things.

The second law of thermodynamics is the means by which this natural process is defined, with physical equations and calculations.

This famous law of physics is also known as the "law of entropy." In physics, entropy is the measure of the disorder of a system. A system's entropy increases as it moves from an ordered, organized, and planned state towards a more disordered, dispersed, and unplanned one. The more disorder there is in a system, the higher its entropy is. The law of entropy holds that the entire universe is unavoidably proceeding towards a more disordered, unplanned, and disorganized state.

The truth of the second law of thermodynamics, or the law of entropy, has been experimentally and theoretically established. All foremost scientists agree that the law of entropy will remain the principle paradigm for the foreseeable future. Albert Einstein, the greatest scientist of our age, described it as the "premier law of all of science." Sir Arthur Eddington also referred to it as the "supreme metaphysical law of the entire universe:"[1]

Evolutionary theory ignores this fundamental law of physics. The mechanism offered by evolution totally contradicts the second law. The theory of evolution says that disordered, dispersed, and lifeless atoms and molecules spontaneously came together over time, in a particular order, to form extremely complex molecules such as

proteins, DNA, and RNA, whereupon millions of different living species with even more complex structures gradually emerged. According to the theory of evolution, this supposed process—which yields a more planned, more ordered, more complex and more organized structure at each stage—was formed all by itself under natural conditions. The law of entropy makes it clear that this so-called natural process utterly contradicts the laws of physics.

Evolutionist scientists are also aware of this fact. J. H. Rush states:

In the complex course of its evolution, life exhibits a remarkable contrast to the tendency expressed in the Second Law of Thermodynamics. Where the Second Law expresses an irreversible progression toward increased entropy and disorder, life evolves continually higher levels of order.[2]

The evolutionist author Roger Lewin expresses the thermodynamic impasse of evolution in an article in Science:

One problem biologists have faced is the apparent contradiction by evolution of the second law of thermodynamics. Systems should decay through time, giving less, not more, order.[3]

Another defender of the theory of evolution, George Stravropoulos, states the thermodynamic impossibility of the spontaneous formation of life and the impossibility of explaining the existence of complex living mechanisms by natural laws in the well-known evolutionist journal American Scientist:

Yet, under ordinary conditions, no complex organic molecule can ever form spontaneously, but will rather disintegrate, in agreement with the second law. Indeed, the more complex it is, the more unstable it will be, and the more assured, sooner or later, its disintegration. Photosynthesis and all life processes, and even life itself, cannot yet be understood in terms of thermodynamics or any other exact science, despite the use of confused or deliberately confusing language.[4]

As we have seen, the evolution claim is completely at odds with the laws of physics. The second law of thermodynamics constitutes an insurmountable obstacle for the scenario of evolution, in terms of both science and logic. Unable to offer any scientific and consistent explanation to overcome this obstacle, evolutionists can only do so in their imagination. For instance, the well-known evolutionist Jeremy Rifkin notes his belief that evolution overwhelms this law of physics with a “magical power”:

The Entropy Law says that evolution dissipates the overall available energy for life on this planet. Our concept of evolution is the exact opposite. We believe that evolution somehow magically creates greater overall value and order on earth.[5]

These words well indicate that evolution is a dogmatic belief rather than a scientific thesis.

The Misconception About Open Systems

Some proponents of evolution have recourse to an argument that the second law of thermodynamics holds true only for "closed systems," and that "open systems" are beyond the scope of this law. This claim goes no further than being an attempt by some evolutionists to distort scientific facts that invalidate their theory. In fact, a large number of scientists openly state that this claim is invalid, and violates thermodynamics. One of these is the Harvard scientist John Ross, who also holds evolutionist views. He explains that these unrealistic claims contain an important scientific error in the following remarks in Chemical and Engineering News:

There are no known violations of the second law of thermodynamics. Ordinarily the second law is stated for isolated systems, but the second law applies equally well to open systems. There is somehow associated with the field of far-from-equilibrium phenomena the notion that the second law of thermodynamics fails for such systems. It is important to make sure that this error does not perpetuate itself.[6]

An "open system" is a thermodynamic system in which energy and matter flow in and out. Evolutionists hold that the world is an open system: that it is constantly exposed to an energy flow from the sun; that the law of entropy does not apply to the world as a whole, and that ordered, complex living beings can be generated from disordered, simple, and inanimate structures.

However, there is an obvious distortion here. The fact that a system has an energy inflow is not enough to make that system ordered. Specific mechanisms are needed to make the energy functional. For instance, a car needs an engine, a transmission system, and related control mechanisms to convert the energy in petrol to work. Without such an energy conversion system, the car will not be able to use the energy stored in petrol.

The same thing applies in the case of life as well. It is true that life derives its energy from the sun. However, solar energy can only be converted into chemical energy by the incredibly complex energy conversion systems in living things (such as photosynthesis in plants and the digestive systems of humans and animals). No living thing can live without such energy conversion systems. Without an energy conversion system, the sun is nothing but a source of destructive energy that burns, parches, or melts.

As can be seen, a thermodynamic system without an energy conversion mechanism of some sort is not advantageous for evolution, be it open or closed. No one asserts that such complex and conscious mechanisms could have existed in nature under the conditions of the primeval earth. Indeed, the real problem confronting evolutionists is the question of how complex energy-converting mechanisms such as photosynthesis in plants, which cannot be duplicated even with modern technology, could have come into being on their own.

The influx of solar energy into the world would be unable to bring about order on its own. Moreover, no matter how high the temperature may become, amino acids resist forming bonds in ordered sequences. Energy by itself is incapable of making

amino acids form the much more complex molecules of proteins, or of making proteins form the much more complex and organized structures of cell organelles.

Footnotes:

[1] Jeremy Rifkin, Entropy: A View, Viking Press, New York , 1980, p. 6.

[2] J. H. Rush, The Dawn of Life, New York, Signet, 1962, p. 35.

[3] vol. 217, 24 September, 1982, p. 1239.

[4] George P. Stravropoulos, "The Frontiers and Limits of Science," American Scientist, vol. 65, November-December 1977, p. 674.

[5] Jeremy Rifkin, Entropy: A New World View, Viking Press, New York, 1980, p. 55.

[6] John Ross, Chemical and Engineering News, 27 July, 1980, p. 40.

The Myth of the "Self-Organization of Matter"

Quite aware that the second law of thermodynamics renders evolution impossible, some evolutionist scientists have made speculative attempts to square the circle between the two, in order to be able to claim that evolution is possible.

The two most important theories that emerged as a result of that aim were the theory of "self-organization" and the related theory of "dissipative structures." The first of these maintains that simple molecules can organize together to form complex living systems; the second claims that ordered, complex systems can emerge in unordered, high-entropy systems.

If we look carefully at all the evolutionist literature on this issue, we can see that they have fallen into a very important trap. In order to make evolution fit in with thermodynamics, evolutionists are constantly trying to prove that a given order can emerge from open systems.

Their problem lies in the — sometimes deliberate — confusing of two distinct concepts: "ordered" and "organized."

We can make this clear with an example. Imagine a completely flat beach on the seashore. When a strong wave hits the beach, mounds of sand, large and small, form bumps on the surface of the sand.

This is a process of "ordering." The seashore is an open system, and the energy flow (the wave) that enters it can form simple patterns in the sand, which look completely regular. From the thermodynamic point of view, order can be set up where

before there was none. But we must make it clear that those same waves cannot build a castle on the beach. If we see a castle there, we are in no doubt that someone has constructed it, because the castle is an "organized" system. In other words, it possesses a clear design and information. Every part of it has been made by a conscious entity in a planned manner.

The difference between the sand and the castle is that the former is an organized complexity, whereas the latter possesses only order, brought about by simple repetitions. The order formed from repetitions is as if an object (in other words the flow of energy entering the system) had fallen on the letter "a" on a typewriter keyboard, writing "aaaaaaaa" hundreds of times. But the string of "a"s in an order repeated in this manner contains no information, and no complexity. In order to write a complex chain of letters actually containing information (in other words a meaningful sentence, paragraph or book), the presence of intelligence is essential.

The same thing applies when a gust of wind blows into a dusty room. When the wind blows in, the dust which had been lying in an even layer may gather in one corner of the room. This is also a more ordered situation than that which existed before, in the thermodynamic sense, but the individual specks of dust cannot form a portrait of someone on the floor in an organized manner.

This means that complex, organized systems can never come about as the result of natural processes. Although simple examples of order can happen from time to time, these cannot go beyond certain limits.

But evolutionists point to this self-ordering which emerges through natural processes as a most important proof of evolution, portray such cases as examples of "self-organization." As a result of this confusion of concepts, they propose that living systems could develop of their own accord from occurrences in nature and chemical reactions. The methods and studies employed by Prigogine and his followers, which we considered above, are based on this deceptive logic.

However, as we made clear at the outset, organized systems are completely different structures from ordered ones. While ordered systems contain structures formed of simple repetitions, organized systems contain highly complex structures and processes, one often embedded inside the other. In order for such structures to come into existence, there is a need for consciousness, knowledge, and planning. Jeffrey Wicken, an evolutionist scientist, describes the important difference between these two concepts in this way:

'Organized' systems are to be carefully distinguished from 'ordered' systems. Neither kind of system is 'random,' but whereas ordered systems are generated according to simple algorithms and therefore lack complexity, organized systems must be assembled element by element according to an external 'wiring diagram' with a high information content . Organization, then, is functional complexity and carries information.[1]

Ilya Prigogine—maybe as a result of evolutionist wishful thinking— resorted to a confusion of these two concepts, and advertised examples of molecules which ordered themselves under the influence of energy inflows as "self-organization."

The American scientists Charles B. Thaxton, Walter L. Bradley and Roger L. Olsen, in their book titled The Mystery of Life's Origin, explain this fact as follows:

In each case random movements of molecules in a fluid are spontaneously replaced by a highly ordered behaviour. Prigogine, Eigen, and others have suggested that a similar sort of self-organization may be intrinsic in organic chemistry and can potentially account for the highly complex macromolecules essential for living systems. But such analogies have scant relevance to the origin-of-life question. A major reason is that they fail to distinguish between order and complexity... Regularity or order cannot serve to store the large amount of information required by living systems. A highly irregular, but specified, structure is required rather than an ordered structure. This is a serious flaw in the analogy offered. There is no apparent connection between the kind of spontaneous ordering that occurs from energy flow through such systems and the work required to build aperiodic information-intensive macromolecules like DNA and protein.[2]

And this is how the same scientists explain the logical shallowness and distortion of claiming that water turning into ice is an example of how biological order can spontaneously emerge:

It has often been argued by analogy to water crystallizing to ice that simple monomers may polymerize into complex molecules such as protein and DNA. The analogy is clearly inappropriate, however… The atomic bonding forces draw water molecules into an orderly crystalline array when the thermal agitation (or entropy driving force) is made sufficiently small by lowering the temperature. Organic monomers such as amino acids resist combining at all at any temperature however, much less some orderly arrangement.[3]

Ilya Prigogine, one of the most famous proponents of self-organization, devoted his whole career to reconciling evolution and thermodynamics, but even he admitted that there was no resemblance between the crystallization of water and the emergence of complex biological structures:

The point is that in a non-isolated system there exists a possibility for formation of ordered, low-entropy structures at sufficiently low temperatures. This ordering principle is responsible for the appearance of ordered structures such as crystals as well as for the phenomena of phase transitions. Unfortunately this principle cannot explain the formation of biological structures.[4]

In short, no chemical or physical effect can explain the origin of life, and the concept of "the self-organization of matter" will remain a fantasy.

Self-Organization: A Materialist Dogma

So why do evolutionists continue to believe in scenarios such as the "self-organisation of matter," which have no scientific foundation? Why are they so

determined to reject the consciousness and planning that can so clearly be seen in living systems?

The answer to these questions lies hidden in the materialist philosophy that the theory of evolution is fundamentally constructed on. Materialist philosophy believes that only matter exists, for which reason living things need to be accounted for in a manner based on matter. It was this difficulty which gave birth to the theory of evolution, and no matter how much it conflicts with the scientific evidence, it is defended for just that reason. A professor of chemistry from New York University and DNA expert, Robert Shapiro, explains this belief of evolutionists about the "self-organization of matter" and the materialist dogma lying at its heart as follows:

Another evolutionary principle is therefore needed to take us across the gap from mixtures of simple natural chemicals to the first effective replicator. This principle has not yet been described in detail or demonstrated, but it is anticipated, and given names such as chemical evolution and self-organization of matter. The existence of the principle is taken for granted in the philosophy of dialectical materialism, as applied to the origin of life by Alexander Oparin.[5]

The truths that we have been examining here clearly demonstrate the impossibility of evolution in the face of the second law of thermodynamics. The concept of "self-organization" is another dogma that evolutionist scientists are trying to keep alive despite all the scientific evidence.

Footnotes:

[1] Jeffrey S. Wicken, "The Generation of Complexity in Evolution: A Thermodynamic and Information-Theoretical Discussion," Journal of Theoretical Biology, vol. 77, April 1979, p. 349.

[2] Charles B. Thaxton, Walter L. Bradley & Roger L. Olsen, The Mystery of Life's Origin: Reassessing Current Theories, 4th edition, Dallas, 1992, p. 151.

[3] C. B. Thaxton, W. L. Bradley, and R. L. Olsen, The Mystery of Life's Origin: Reassessing Current Theories, Lewis and Stanley, Texas, 1992, p. 120.

[4] I. Prigogine, G. Nicolis ve A. Babloyants, "Thermodynamics of Evolution," Physics Today, November 1972, vol. 25, p. 23.

[5] Robert Shapiro, Origins: A Sceptics Guide to the Creation of Life on Earth, Summit Books, New York, 1986, p. 207.