

# The Living Universe Hypothesis

## Cosmic Mutation and Adaptation

**Hassan Ajami**

Philosophy Department  
Maricopa Community Colleges  
Phoenix, USA  
[hassan.ajami@cqc.edu](mailto:hassan.ajami@cqc.edu)

**Abstract**—The living universe hypothesis says that the universe is a living organism. Hence, it has the characteristics of a living being, such that it is constructed out of information and built in light of the processes of metabolism, adaptation, natural selection and Mutation. The living universe hypothesis is consistent with the cosmological view that our universe could transform into other universes.

**Keywords:** *Living Universe; Cosmic Metabolism; Cosmic Adaptation; Cosmic Natural Selection; Cosmic Mutation; Transformant Universes and Parallel Worlds*

As a living organism, the universe was born, it grows, and it will ultimately die. It was born in virtue of the Big Bang, which is the direct cause of the existence of our actual universe. The universe also grows, such that it is constantly expanding and new galaxies are formed. And it will die when it exhausts all of its energy. Since we can successfully explain the universe in the same terms used to explain a living organism, such as in terms of birth and growth, it follows that the universe is a living organism otherwise we wouldn't have been successfully able to explain it in the same terms used for explaining living organisms.

### The Universe as Information

According to a dominant scientific paradigm, the universe consists of information and exchanges of information, as the physicist John Wheeler says [1]. But if the universe is a set of information, then it is a living organism because living organisms are constructed out of information inherited in their biological genes. Therefore, the scientific theory, which holds that the universe is information, implies that the universe is a living organism. This shows that the living universe hypothesis is plausible, given that it is implied by a dominant scientific paradigm.

### Cosmic Metabolism

Our universe is characterized by metabolism as living organisms are. Metabolism is the process of changing food into energy. The same happens in the universe, such that our universe changes or converts mass into energy, leading, for example, the sun to possess its energy. In this sense, the universe functions as a living organism, such that it is governed by metabolism, namely cosmic metabolism, according to which, the universe changes mass into different forms of energy.

The principle of mass-energy equivalence in physics says that mass and energy are the same. And this is why mass can be converted into energy [2]. Yet this is nothing but the process of metabolism in living organisms, in virtue of which, food is changed into energy. Therefore, cosmic metabolism actually exists, and in light of it, the universe has its energy.

### Cosmic Adaptation

The universe is characterized by cosmic adaptation, such that it adapts to its environment exactly as living organisms do. This also shows that the universe is alive because it behaves as any living organism does. The environment of our universe consists of all the parallel worlds. From this perspective, our actual universe adapts to those parallel universes which constitute the environment of our actual universe.

Those parallel worlds have different laws of nature and facts. For example, in one parallel universe, particles (such as electrons) are particles, while, in another parallel universe, particles are waves instead of particles. Hence, when our actual universe adapts to those diverse parallel universes, it adopts the behavior of those different universes, leading our universe to behave as if particles are particles and waves at the same time, exactly as quantum mechanics says. This indicates that the living universe hypothesis is successful in explaining why our universe is behaving as if its particles are particles and waves at the same time. And in light of its successful explanatory power, we could accurately infer that it is plausible.

## Cosmic Natural Selection

Our universe is governed by natural selection as living organisms are. For example, from the perspective of the cosmic adaptation hypothesis (according to which, our universe adapts to parallel universes), the universe is subject to cosmic natural selection, such that only those properties which enable the universe to adapt to the diverse parallel universes will be selected, such as the property of particles being particles and waves at the same time. Since our universe is characterized by cosmic adaptation, such that it adapts to different parallel universes, it follows that only those characteristics which lead our universe to adapt to different parallel universes will be selected. And this is precisely the meaning of cosmic natural selection. One example of a characteristic or property of our universe chosen by cosmic natural selection is the property of particles behaving as particles and waves at the same time due to the fact that in some parallel universes particles are particles, while, in other parallel universes, particles are waves.

## Cosmic Mutation and Transformant Universes

Mutation is a change of the structure of biological genes which amounts to a change of the living organism. But biological genes are sets of information in light of which a living organism is constructed. Hence, mutation is a change of the information processed by a living body. From this perspective, if the universe is alive, it could mutate as living organisms do, such that its laws (which are sets of information dictating how the universe will behave) could change, and hence, its facts and events could change as well, leading the universe to transform into another universe. This shows that the living universe hypothesis implies that our universe is a transformant universe, such that it is able to transform into different universes possessing different laws, facts and events. And therefore, the living universe hypothesis could be tested in light of its implications, such as its implication that our universe could mutate and transform into a different universe.

All of this indicates that the living universe hypothesis coheres with the cosmological theory which says that there are transformant universes, i.e. universes which are capable of changing into other universes. Any universe is able to transform into a different universe due to cosmic mutation, otherwise there should be a strange mechanism prohibiting universes from changing into other universes, such as a meta-law dictating that a universe could not transform into another universe. The probability of the existence of such a prohibiting meta-law is very low because if there were such an all-powerful meta-law (prohibiting the occurrence of any change in the laws of universes and the transformation and/or mutation of universes), then it would be functioning as an all-

powerful God, which is unscientific. Therefore, universes could transform into other universes in light of cosmic mutation.

Cosmic mutation is nothing but the ability of any universe to change into other universes possessing different facts and laws of nature. According to the cosmic mutation hypothesis, universes mutate, such that a universe could transform into a different universe, leading to the conclusion that there are transformant universes, such that traces of other universes could be found in any universe. If this conclusion were false, then the cosmic mutation hypothesis would be false. Hence, the cosmic mutation hypothesis could be tested, leading to the conclusion that it is scientific.

## A Scientific Hypothesis

The living universe hypothesis is also scientific because it could be tested. One example of how this hypothesis could be tested is the following: according to the living universe hypothesis, the universe is a living organism, and hence, it grows, ages, and will ultimately die. If this conclusion were false, then the living universe hypothesis would turn out to be false. Thus, the living universe hypothesis could be tested, leading to the conclusion that it is a scientific hypothesis.

## References

- [1] James Gleick: The Information. 2011. Pantheon Books.
- [2] Robert L. Jaffe and Washington Taylor: The Physics of Energy. 2018. Cambridge University Press.