

## **God Particle**

The entire Cosmos, including vast stretches of space, encompasses billions of living organisms. Universal consciousness can be referred to as a living entity full of organs such as the heart and lungs, which are continuously expanding and contracting. While most cosmologists believe that our universe was created in an explosive beginning called the Big Bang, some scientists believe that it was a big bounce. They say that there was a previous universe that collapsed and bounced into the universe we are living in. According to them, the expanding universe is just one phase in a never-ending cycle of expansion and contraction, similar to a beating heart. Under the laws of gravity contracts, the universe bounces back into an expanded phase. The expanding phase will, sooner or later, run out of steam, overcome by the attractive force of gravity, which eventually pulls everything in the universe to a small size. However, when it contracts owing to gravity, at the maximum point, gravity becomes so strong that it drives the universe into a singularity. A singularity is a place of infinite density, where gravity becomes so strong that it crushes all matter into a single point, allowing nothing to escape, not even light. Those cosmologists who believe in the Big Bang theory believe it was the singularity, and they had to invent a new force called inflation to allow the universe to expand out from it. On the other hand, big-bounce believers think that the universe never shrinks down to a singularity. They explained the avoidance of the ultimate crunch with the help of neutrinos, which are one of the most mysterious particles known to Physics. Neutrinos have almost no mass and pass through ordinary matter that is undetected. They are moving through each of our bodies right now, without ever knowing it. Every star in the universe spews out a constant stream of neutrinos. The universe is full of these elements. Under the immense pressure of a contracting universe, the cosmic sea of neutrinos would become so tightly squeezed together that they would transform into a special state of matter – superfluid-like liquid helium. The strange property of this superfluid is that it continues to flow out of the edges of the container. However, this does not like to be contained. This tendency for a neutrino to not be contained causes repulsive pressure and causes the universe to bounce and expand. According to this idea, our universe has been experiencing cycles of expansion and contraction for trillions of years. At each bounce, most of the matter, including stars and galaxies, is crushed and then spats out in a completely new form. However, neutrinos survive unscathed conditions. This invisible sea of particles is the lifeblood of the universe, which is the fluid driving its pulse. The big bounce model portrays our Cosmos as a

dynamic evolving entity that resembles a living being. If we look at the laws of nature, we see that they are delicately fine-tuned to make the universe hospitable to life. If laws are changed even slightly, the universe can no longer remain friendly to life, as we consider knowing life. Many biologists see this as a mystery; why is the universe hospitable? Why is this so friendly to biology? Cosmologists have also long wrestled with this puzzle, which they call fine-tuning. If any of the forces of nature were stronger or weaker by a small fraction of even one percent, stars and galaxies would never form, and even atoms might not exist. To some extent, this is a sign that our universe was carefully crafted by the hand of an unknown creator who tailored it to support life. Evolutionists believe that creatures as complex as humans did not just miraculously pop into existence but rather evolved through countless steps from ever simpler organisms. Likewise, our immensely complex universe may have been shaped by a cosmic version of biological evolution. Some scientists believe that the answer to this riddle lies in the hidden hearts of black holes, where the known laws of physics break down, and the laws of quantum gravity take over. Current theories of physics predict that when a giant star explodes, its core should collapse to a single point and become infinitely dense. However, according to the understanding of quantum gravity by some scientists, it will not, instead, be the moment when a new universe is born. At the point of singularity, they say that the star would become infinitely dense, it bounces, maybe inwardly, and begins expanding again, and new regions of space-time within the confines of the horizon of the black hole are formed. The dimensions of space and time of these new universes branch from ours inside the black hole. The laws of physics change when that happens at this extremely violent event so that the children resemble the parent, but with some minor changes in basic physical laws. It works like biological evolution, and we have a population of universes. Our universe may exist in an ever-growing cosmic tree of life. Our universe may be just a member of a giant family tree of the Great Cosmos. From the current viewpoint of physics, we cannot see outside our universe; this idea may take many years to be established from the platform of standard laws of astronomy and cosmology. Like our heart pumps out blood to every corner of our being, keeping us alive, perhaps the Cosmos is also driven by a heartbeat that pumps out clusters of galaxies once every trillion years. We could be the child of another universe, and there may be countless spawning. On a lighter note, this universe resembles a giant computation infected by a computer virus called biological life, which replicates its limited vision and foresight and is not minutely ready to see beyond the established

pattern and groove to which it firmly adheres. Someone from outside, well equipped with the necessary antivirus and other tools, is needed to clean up the accumulated mess.