

Does the idea of multiple universes compete with design?

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Many people mistakenly imagine that the idea of infinite parallel universes can explain the overall cosmic system of physics, life, and intelligence, making it compete with the design argument. However, relying on the logic of probabilities makes this idea nothing in the face of the design argument, as we will see. Historically, the concept of parallel universes emerged in the 1950s in response to the problem of Schrodinger's quantum cat. It was then employed in the 1980s as an explanation for fine physical tuning. Before physicists discovered the remarkable precision in the laws of physics and their constants, the scientific perception of the universe's origin was based on coincidences and random processes. When they saw the astonishing precision spread throughout the universe, many retreated from this idea. To avoid slipping into the pitfalls of the "God of the gaps" and metaphysical worlds, they found no other suitable alternative to explain what we observe of the universe's harmony towards life and intelligence, except by assuming the existence of countless uncountable universes, even though this idea has mythological connotations that are difficult for the human mind to comprehend.

More importantly, this idea eliminates the fundamentals of all sciences, as it makes the interpretation of physical, biological, psychological, and mental phenomena based on cosmic chaos. From this perspective, it represents the "chaos of gaps", where there is no difference in terms of the magical solution from the idea of the "god of gaps". In both cases, there is no need for science, discovery, or research into the causes of objective phenomena and trying to explain them because they simply become interpreters according to cosmic chaos, as in the first case, or according to the "god of gaps", as in the second case. This idea has at

least nine different versions, the most prominent of which dates back to the theory of "M" or the Superstring theory, which estimated the multiple universes that correspond to low-energy string vibrations at around 10^{500} universes, based on the possible geometrical shapes of what is known as the Calabi–Yau space. Despite this, it is amazing that this very large number of universes is nothing compared to the explanation of the formation of a long protein in a cell, let alone the random formation of the simplest cell, which contains approximately 42 million protein molecules, and carries digital machines filled with encrypted information according to its own linguistic system, and it is programmed in this sense like computers and robotic entities, but it is way greater in efficiency if compared.

Mathematically, it is possible to estimate the probability of the random formation of a single protein from amino acids, such as hemoglobin, for example, at about 10^{-190} , and because the number is huge, Isaac Asimov called it a powerful expression of what is miraculous to the mind, and called it the number of hemoglobins. According to Francis Crick, if the length of the protein chain is 200 amino acids, which is shorter than the average, and since we have 20 types of acids, the number of possible matches for this protein to be randomly formed is 10^{-260} . While the probability of a very small protein with a length of 100 amino acids forming randomly is 10^{-130} , and a protein with a length of 150 amino acids is 10^{-195} , neglecting the addition of other factors that further reduce the probability of the random formation of these proteins.

Proteins typically have greater lengths than mentioned, consisting of hundreds, or even thousands, of amino acids. A cell itself contains hundreds of different types, or even thousands, of proteins. Thus, random estimations of their emergence lead to staggering numbers beyond imagination. From this perspective, relying on mathematical calculations renders the hypothesis of infinite multiple universes nothing in the face of the random emergence of a simple living cell, despite estimates of these universes exceeding 10^{500} . This immense

number is nothing compared to the random emergence of a simple cell. The astonishing probability numbers found with small proteins cannot be compared to the emergence of such a cell, as some cells possess proteins containing thousands of amino acids, leading to a number that far exceeds the multiple universes. Some scientists have calculated the probability of the simplest cell formation at random, including Fred Hoyle and Chandra Wickramasinghe, whose research estimated this probability to be approximately 10^{-40000} . Following this line, cell biologist Edmund Jack Ambrose arrived at a probability of around one in $10^{2,000,000}$. This number exceeds the one determined by Hoyle and Wickramasinghe beyond imagination, but it is mathematically justified, regardless of other considerations.

What appears to us is that the ordinary cell is not only greater than the universe, but greater than all the multiple universes, even if they possess precise physical systems with no life. According to the information criterion, the system in cell exceeds all the systems in these universes. If we wanted to estimate the number of possible events in these universes, and therefore the information, we have a criterion of what our universe carries in terms of the possibility of events, which we can measure against other universes. Its determination depends on the number of the universe's particles of fermions and bosons, and this number is estimated at about (10^{89}), and is added to the estimated age of the universe, which is more than 10^{17} seconds, equivalent to approximately 14 billion years, according to current estimates. In addition, there is the Planck time, which represents the total number of interaction events in one second, which is (10^{43}). When we multiply these three factors, we get the total possible events for the universe, which is approximately 10^{149} events. Therefore, by multiplying with the total multiple universes, its possible events will become approximately 10^{649} , which is a very large number, but nothing compared to the estimation of Hoyle and Wickramasinghe, not to mention the estimation of Ambrose for a bacterial cell. Therefore, if we rely on the mathematical estimates previously shown by a number of scientists we referred to, the cell would be greater than all the infinite

universes in an incomparable way.

Translated by: Omar Khaled

Reference: <https://www.fahmaldin.net/index.php?id=2743>