

Intelligent Design: Are we fighting against God?

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Has God intentionally designed the world so that he is not evident through rational inquiry alone? The proponents of intelligent design say emphatically no! Evidence for God abounds in nature. In this essay, however, I wish to suggest 1) that the evidence for God in nature is not that compelling; 2) that while there are numerous instances of apparent design in nature, there are likewise countless instances of apparent *unintelligent* design; 3) that the Bible does not support the search for evidence of God in nature; 4) that it is a very real possibility that God has gone out of his way to hide his existence from purely rational inquiry; and therefore 5) that those who champion intelligent design may very well be at cross purposes with God.

The cornerstone of the intelligent design edifice is the supposed insufficiency of any attempts at a naturalistic explanation for the origin of life. Of all the scientific theories of origin, the theories regarding the origin of life are by far the weakest. It is often claimed that science really has no idea how life originated. While I think this is an overstatement, the problem has proved to be extraordinarily difficult. Nevertheless, I find nothing in the laws of nature, nor in the Bible to preclude a naturalistic origin of life. The increase in entropy demanded by the second law of thermodynamics applies only to isolated systems. The second law therefore does not preclude an increase in order locally, which indeed is observed in innumerable instances, including, for example, the formation of crystals, the development of the zygote, and the exponential increase in DNA under the polymerization chain reaction. The argument based on the extreme probabilities associated with assembling large bio-molecules is a straw man – the theory that is debunked bears very little resemblance with any theory advanced by researchers in recent years^{1, 2, 3, 4, 5}.

While anything close to a consistent theory is probably not even close at hand, there have been many similar instances in science. Numerous phenomena have defied explanation for hundreds of years. The wave-particle duality of light is one example. This was a subject of controversy back in the days of Isaac Newton (and before), and yet was not finally resolved until the development of quantum mechanics in 1925. The wave-particle duality of light was therefore an unexplained phenomenon for more than two hundred and fifty years. Lord Kelvin is thought by some to have once said, “Heavier-than-air flying machines are impossible.” Given all the failed attempts that he had likely witnessed, it

¹ Leslie E. Orgel, “The Origin of Life on the Earth,” *Scientific American*, October 1994.

² Julius Rebek, Jr., “Synthetic Self-Replicating Molecules,” *Scientific American*, July 1994.

³ W. K. Johnston, P. J. Unrau, M. S. Lawrence, M. E. Glasner, D. P. Bartel, “RNA-Catalyzed RNA Polymerization: Accurate and General RNA-Templated Primer Extension,” *Science*, Vol. 292, 18 May 2001, pp. 1319-1325.

⁴ Jeffrey L. Bada, “Origins of Life,” *Oceanography*, Vol. 16, No. 3/2003, pp. 98-104.

⁵ Robert Shapiro, “A Simpler Origin for Life,” *Scientific American*, June 2007.

would not have been unreasonable to make such a statement. What was lacking was a method to lift these machines off the ground. Of course that method was later discovered. In the same way, the present lack of a method for the origin of life does not prove anything, except that the problem is a difficult one. Nearly all the arguments against a naturalistic origin of life, when analyzed, amount to little more than a statement that the right scenario and the right mechanism have not yet been discovered. This is acknowledged by everyone in the field. There are thousands of possibilities to consider and test experimentally, and the possibilities continue to expand with every new discovery.

These days people have become accustomed to rapid scientific discovery. I have often read accounts belittling the current (by some reckonings) feeble attempts to solve this problem, notwithstanding the continuous advances that have been made these past fifty years. Some have suggested that if a solution has not been discovered in fifty years, then there is no solution, and that scientists should therefore abandon the search and embrace intelligent design. The truth is that by any fair assessment the problem of the origin of life, given the extreme complexity of life and the paucity of evidence that remains after four billion years, is clearly the most difficult problem that science has ever faced⁶. The lack of a solution in fifty years of research should not surprise anyone. If there is no solution in a thousand years, perhaps then we should question the pursuit. To my mind, however, it is disreputable, even disgraceful, for scientists to abandon the pursuit. “It is the glory of God to conceal a matter; to search out a matter is the glory of kings.” – Proverbs 25:2. And yet abandoning the pursuit is the only recourse for those who rely on miraculous intervention. There is no other way to know whether God has intervened than to continue the search.

But let it be supposed that scientists are clueless regarding how life might have originated on earth. I still think it is a bad idea to assume that a naturalistic origin of life is impossible, and to therefore advocate intelligent design. The church has a very long history of supposing that numerous phenomena, since explanations were wanting, must necessarily have required miraculous intervention by God. This practice of invoking miraculous intervention by God to cover gaps in scientific understanding is referred to as the *God of the Gaps* fallacy. Innumerable times naturalistic explanations have been discovered for phenomena that previously were not understood, and for which God had been proffered as the explanation⁷. As one scholar⁸ has put it, “The problem is that such gaps ... tend to close up with the advance of scientific knowledge, thus putting religion in the embarrassing position of constant retreat.” This repeated embarrassment has strengthened the resoluteness and often the belligerence of atheists who, upon such an occasion, find opportunity to ridicule the faith. Given the extent to which intelligent design has been advertised to the public, there is the potential for huge embarrassment to the church if an origin of life is discovered in the lab.

⁶ The understanding of consciousness, I suppose, is a more difficult problem, if this even falls within the realm of science.

⁷ A few instances include: earthquakes, lightning, the movement of the planets, and the synthesis of bio-molecules.

⁸ Lawrence M. Principe, *Science and Religion*, The Great Courses, The Teaching Company.

While the evidence for a creator gleaned from creation is powerful and conclusive to many, it likewise fails to compel many. Why is it that almost universally the top scientists, the Nobel Laureates – those individuals who devote their lives to studying nature at its deepest levels – almost universally find no evidence for God in creation? I would suggest that the answer is that the evidence is simply not that compelling. For every supposed irrefutable proof there is, from my perspective, a reasonable alternative naturalistic explanation. Is the extreme fine tuning of the constants of nature proof of God? Not if there are an infinite (or extremely large) number universes. We have no way of knowing whether the observable universe is all there is, or whether this universe is merely one bubble on an infinite space-time sheet hosting innumerable similar universes. Is the beginning of time at the Big Bang proof of a creator? Not if the (observable) universe is merely the result of a random quantum fluctuation in the space-time fabric. Where did all the matter come from, if not from God? One very real possibility is that all the positive energy in the universe is exactly cancelled by negative gravitational energy⁹. The case for a creator inferred from nature is simply not that compelling. Perhaps the reason is that God never intended to reveal himself in this way.

Moreover, it seems to me that intelligent design proponents spend insufficient time addressing the many instances of apparent *unintelligent* design, or disteleology. Vestigial characters abound in nature. There are innumerable species of flightless birds, and countless underground and cave-dwelling species that have lost their sight but nevertheless retain vestigial eyes that are reduced or degenerate and are often covered with skin. Instances are not limited only to anatomical structures, but encompass behavior as well, including elaborate courtship displays and pseudo-mating in species which reproduce asexually. In humans, vestiges include wisdom teeth which fail erupt from the gums, the vermiform appendix, and goose bumps, the apparent purpose of which is, in response to a chill, to fluff up fur which is no longer there; or, in response to fear, to present a larger appearance to a potential predator. Since the advent of full genome sequencing innumerable instances of disteleology have been observed in the form of pseudogenes¹⁰ and ancient repetitive elements¹¹, both of which are functionless genetic accidents shared between several species. The most remarkable find, however, has been the discovery of the obvious chromosome fusion event¹² leading to human chromosome 2, complete with fused head-to-head telomeres and remnant centromere. It is extremely hard for me to imagine that this is somehow a design feature. The instances of disteleology, therefore, seem to me to outweigh those of teleology. Intellectual honesty demands that these issues be addressed squarely. Those who fail to do so may be judged guilty of spin tactics for neglecting to present the other side.

⁹ Alan H. Guth, *The Inflationary Universe*, 1998, Vintage, p. 12.

¹⁰ Edward E. Max, "Plagiarized Errors and Molecular Genetics," <http://www.talkorigins.org/faqs/molgen/>

¹¹ Francis S. Collins, *The Language of God: A Scientist Presents Evidence for Belief*, 2006, Free Press, p. 135-137.

¹² J. W. Ijdo, A. Baldini, D. C. Ward, S. T. Reeders, and R. A. Wells, "Origin of Human Chromosome 2: An Ancestral Telomere-Telomere Fusion," *PNAS* 1991;88;9051-9055.

But does not the Bible proclaim that God is evident in nature? Do not the heavens declare the glory of God? The following verses are often quoted as a mandate from the Bible to search for scientific evidence for God in creation:

¹⁸The wrath of God is being revealed from heaven against all the godlessness and wickedness of men who suppress the truth by their wickedness, ¹⁹since what may be known about God is plain to them, because God has made it plain to them. ²⁰For since the creation of the world God's invisible qualities – his eternal power and divine nature – have been clearly seen, being understood from what has been made, so that men are without excuse. – Romans 1:18-20

¹The heavens declare the glory of God; the skies proclaim the work of his hands. ²Day after day they pour forth speech; night after night they display knowledge. ³There is no speech or language where their voice is not heard. ⁴Their voice goes out into all the earth, their words to the ends of the world. – Psalm 19:1-4

But these verses provide no such mandate. It is a violation of the text to suggest that they support the view that God's existence is manifest through philosophical and scientific inquiry. There is nothing in either verse that remotely suggests that God's existence is to be inferred through the recondite laws of nature. Rather, just the opposite is proclaimed: God's nature is *plain* to see, is *clearly seen* from what has been made. If God is not clearly seen in the grandeur of the heavenly expanse, in the power of a sunset, or in the eyes of a mother at the birth of her child, he is not going to be any more plainly evident after trudging through twenty pages of probability calculations.

Furthermore, these verses are clearly making the rhetorical appeal that *aesthetic* qualities of creation – the grandeur and glory of creation – point to corresponding qualities of God. It is likely that Paul had the deuterocanonical Wisdom of Solomon in mind as he penned Romans 1:

¹For all men who were ignorant of God were foolish by nature; and they were unable from the good things that are seen to know him who exists, nor did they recognize the craftsman while paying heed to his work ... ⁵For from the greatness and beauty of created things comes a corresponding perception of their Creator. – Wisdom 13:1, 5

Therefore the majesty of God, his eternal power and divine nature are plainly seen and are clearly evident from aesthetic, not rational qualities of the creation – from the *greatness* and the *beauty* of created things.

Moreover, it would not surprise me if God chose to hide himself – to create a world where he is not evident through intellectual inquiry alone, because God has never desired a mere intellectual belief in himself. The demons have this sort of belief (James 2:19),

and yet clearly their faith is not pleasing to God. The Bible is replete with indication of how God has chosen to hide himself from intellectual inquiry:

²⁵At that time Jesus said, “I praise you, Father, Lord of heaven and earth, because you have hidden these things from the wise and learned, and revealed them to little children. ²⁶Yes, Father, for this was your good pleasure.” – Matthew 11:25-26

¹⁸For the message of the cross is foolishness to those who are perishing, but to us who are being saved it is the power of God. ¹⁹For it is written: “I will destroy the wisdom of the wise; the intelligence of the intelligent I will frustrate.” ²⁰Where is the wise man? Where is the scholar? Where is the philosopher of this age? Has not God made foolish the wisdom of the world? ²¹*For since in the wisdom of God the world through its wisdom did not know him*, God was pleased through the foolishness of what was preached to save those who believe. ²²Jews demand miraculous signs and Greeks look for wisdom, ²³but we preach Christ crucified: a stumbling block to Jews and foolishness to Gentiles, ²⁴but to those whom God has called, both Jews and Greeks, Christ the power of God and the wisdom of God. ²⁵For the foolishness of God is wiser than man’s wisdom, and the weakness of God is stronger than man’s strength. – 1 Corinthians 1:18-25

Is not 1 Corinthians 1:21 saying that it was God’s wisdom not to reveal himself to the intellect of man? If God had wanted to reveal himself in this way, why would he not have revealed himself in a more obvious manner, in such a way as to stop all debate?

If God has intentionally designed the world so as to hide his presence, is this then not deception on God’s part? When we perform scientific investigations we are, in a sense, asking questions about nature. In many instances God is free with answers. But when we ask of nature whether or not God exists, we get no answer. It would be deception if God gave us a wrong answer – but giving no answer is not being deceptive. God has indicated to us the way to find him: “You will seek me and find me when you seek me with all your heart.” – Jeremiah 29:13. We will find God when we seek him with all of our *heart*. There is no indication that we will find him if we seek him merely with our mind.

The deist position that God is no longer active in his creation seems to me to be at odds with numerous verses in the Bible. For example, “Are not two sparrows sold for a penny? Yet not one of them will fall to the ground apart from the will of your Father.” – Matthew 10:29. (Also Proverbs 16:1, 9; 19:21.) But if God is active in his creation, should he not be evident? For the past several years I have worked in the field of signals intelligence. Great effort is devoted to hiding signals so as to preclude detection by an adversary. Signals are designed to be featureless and are pseudorandomly buried far below the thermal noise level so as to deny detection. Furthermore, in the case that signals are detected, cryptography is used to further hide information behind pseudorandom sequences. This work is performed in secure facilities which routinely employ background noise to prevent secure conversations from being overheard. Windows are

textured and equipped with white-noise sources to prevent laser interferometry from detecting voice modulation of the windows. A few years ago it struck me that if God wanted to hide his activity in the world, he could easily do so, in a similar manner, by masking his activity in a sea of pseudo-randomness, well below the noise floor, and beyond possible detection.

The current and longstanding theory of phenomena at atomic and subatomic scales is quantum mechanics. In the past one hundred years since its development there has never been a single observation violating the theory. Quantum mechanics and its relativistic counterpart, quantum field theory, continually produce predictions with unfathomable accuracy. The difference, for instance, between the measured and predicted values of the *g*-factor of the electron is less than one part in a trillion. Inherent to the theory is that quantum events are non-deterministic. The timing of the clicks of a Geiger counter, for example, cannot be predicted, even in principle. These events are viewed as being random and therefore *uncaused*. This randomness provides a mask behind which God could easily hide his activity in this world. This is pure speculation, of course. We know, however, that God operates in this world, and there is reason to believe from the Bible that he wishes to conceal his activity. If we then find the laws of nature so perfectly designed so as to provide ample room for God's activities to be veiled, it is not an unreasonable speculation that God does in fact operate behind this veil.

The view that perhaps God operates within the physical world behind the veil of quantum indeterminacy, free from detection, is common enough. A number of writers^{13, 14, 15, 16} have observed the possibility, though not all necessarily supporting the view. Jim Baggott³ has this to say

And what of God? Does quantum theory provide any support for the idea that God is behind it all? This is, of course, a question that cannot be answered here, and I am sure that readers are not expecting me to try. Like all of the other possible interpretations of quantum theory discussed in this chapter, the God-hypothesis has many things to commend it, but we really have no means (at present) by which to reach a logical, rational preference for any one interpretation over the others. If some readers draw comfort from the idea that either Spinoza's God or God in the more traditional religious sense (Western or Eastern) presides over the apparent uncertainty of the quantum world, then that is a matter for their own personal faith.

Indeed, quantum indeterminacy provides a means, within the current laws of physics, not only for God's agency, but man's agency (free will) as well.

¹³ Kenneth Miller, *Finding Darwin's God*, Harper Perennial, 2002, pp. 250-251.

¹⁴ Paul Davies, *The Mind of God*, 2005, Simon & Schuster Paperbacks, pp. 191-192.

¹⁵ Jim Baggott, *Beyond Measure: Modern Physics, Philosophy, and the Meaning of Quantum Theory*, Oxford University Press, 2004, p. 262.

¹⁶ Del Ratzsch, *The Battle of Beginnings*, 1996, InterVarsity Press, pp. 186-188.

For many years, however, it was believed that quantum indeterminacy had little impact at macroscopic scales. Subsequently, in the second half of the twentieth century, chaotic phenomena were discovered. One of the most astonishing finds was that infinitesimal perturbations driving non-linear phenomena can lead to wildly divergent effects. In 1972 Edward Lorenz presented a paper entitled, “Does the flap of a butterfly’s wings in Brazil set off a tornado in Texas.” The answer to the question posed in the title of the paper is an astonishing yes! That is, through the so called butterfly effect, it is a very real possibility that a disturbance as minute as the flap of a butterfly’s wings could set off an event as significant as a tornado. Recently it has been recognized that through chaos, quantum indeterminacy is amplified to macroscopic scales.¹⁷ The remarkable conclusion is that any non-linear phenomena leading to chaotic behavior is influenced by innumerable events that are *uncaused in this world*. Of particular note is that the human brain is manifestly and necessarily non-linear, and not surprisingly chaos has been observed in human brain waves^{18, 19, 20}.

One common complaint of this view is that while quantum events are random, randomness provides no more room for the hand of God than does strict determinism. However, all that science can determine is that quantum events *appear* random. If communications engineers can devise pseudorandom sequences which appear random at all levels of inspection, certainly an infinite intelligence can do even better. The events, therefore, which quantum theory hypothesizes as random, are, according to this idea, not completely random, but are somehow influenced by God and other free agents to direct their sphere of influence in this world to a desired end.

Evolutionary theory has been opposed in many Christian circles on many grounds, notwithstanding the overwhelming evidence in support of the theory. One of the grounds for dismissal has been a revulsion over the idea that innumerable chance events have determined the current array of biota, and in particular, man. For example, Stephen J. Gould has remarked:

But [life’s] actual pathway is strongly underdetermined by our general theory of life’s evolution. This point needs some belaboring as a central yet widely misunderstood aspect of the world’s complexity. Webs and chains of historical events are so intricate, so imbued with random and chaotic elements, so unrepeatable in encompassing such a multitude of unique (and uniquely interacting) objects, that standard models of simple prediction and replication do not apply. ... History includes too much chaos, or extremely sensitive dependence on minute and unmeasurable differences in initial conditions, leading to massively divergent outcomes based on tiny and unknowable disparities in starting points. And history includes too much

¹⁷ Murray Gell-Mann, *The Quark and the Jaguar*, W.H. Freeman and Company, 1994, pp. 27, 134.

¹⁸ P. Faure and H. Korn, Is there chaos in the brain? I. Concepts of nonlinear dynamics and methods of investigation, *C.R. Acad. Sci. Paris, Sciences de la vie / Life Sciences* 324 (2001) 773–793.

¹⁹ H. Korn and P. Faure, Is there chaos in the brain? II. Experimental evidence and related models, *C. R. Biologies* 326 (2003) 787–840.

²⁰ When I told my wife Karen this, she remarked that she has known for years that chaos reigned in her mind!

contingency, or shaping of present results by long chains of unpredictable antecedent states, rather than immediate determination by timeless laws of nature. Homo sapiens did not appear on the earth, just a geologic second ago, because evolutionary theory predicts such an outcome based on themes of progress and increasing neural complexity. Humans arose, rather, as a fortuitous and contingent outcome of thousands of linked events, any one of which could have occurred differently and sent history on an alternative pathway that would not have led to consciousness. ... H. sapiens is but a tiny, late-arising twig on life's enormously arborescent bush – a small bud that would almost surely not appear a second time if we could replant the bush from seed and let it grow again.²¹

I see no reason, however, for revulsion over this idea. Behind the veil of quantum indeterminacy God is able to direct asteroids toward or away from the earth, initiate or halt mass extinctions, cause or prevent mutations, begin or end ice ages, direct earthquakes, hurricanes and tornadoes, all according to the purposes that he has established, all within the laws of physics, and all beyond human observation.

Returning to the original question I posed: Has God intentionally designed the world so that he is not evident through rational inquiry alone? I believe that he has, and let me summarize the three main reasons: 1) there is no *compelling* evidence in nature for God's existence; 2) there are several indications in the Bible that God has hidden himself from purely rational inquiry; and 3) the laws of nature are *masterfully* designed in such a way that God could, if he chose to, operate within the world, free from detection, behind the veil of quantum indeterminacy. It is as if God has said "This far you may come and no farther; here is where your proud inquiries halt." I am therefore concerned that those who promote intelligent design are waging a war that cannot be won, and that perhaps God is opposed to. Whatever good the intelligent design movement has achieved so far, this good has been achieved at the cost of alienating much of the scientific community. If indeed God has hidden proof of his existence in the constants of the universe and in the genomes of Earth's biota, then time may bear this out. However, if instead he has hidden his own activity in quantum indeterminacy, not wishing to reveal himself to man's intellect through the laws of nature, then I am afraid that we will promote intelligent design to the detriment of the church, only to find that we ourselves are fighting against God.

²¹ Stephen J. Gould, *The Evolution of Life on the Earth*, Scientific American, October 1994.