

Did Dawkins Reveal a Blind Watchmaker?

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SECTION ONE

I. Introduction

Over the last two thousand years, Christians, as well as other theists, have attempted to prove the existence of God. The motivations and expectations of these proofs have varied. In the Enlightenment, people believed that they could prove God's existence in the same way that I could prove that the three angles of a triangle equal one hundred and eighty degrees. They did not only think that these proofs could succeed. Some even believed that a logical proof was a necessary foundation for the Christian religion. Today, theologians are more concerned with showing the probability or plausibility of the belief in an omnipotent being, in order to defend themselves from modern skeptics. A good proof for the existence of God can show that theistic religions are not illogical absurdities, but logically defensible positions.

There are many different types of proofs for the existence of God, but the form that I find most promising is the argument from design. The most famous version of the design argument was formulated by William Paley. Basically, it claims that the complexity of different aspects of the universe, especially in biology, demands a creator.

Many philosophers, like Hume and Kant, criticized this argument, but the design argument faced its most formidable opponent after 1859 with the publication of *The Origin of Species* by Charles Darwin. Darwin's theory of evolution claims that complexity found in organisms is the result of physical forces. Therefore, the obvious conclusion is that if complexity is caused by blind forces, then it was not created by higher being. Darwin alludes to this conclusion, but Richard Dawkins clearly presents that sort of argument in his two works, *The Blind Watchmaker* and "The Improbability of God". Dawkins' basic thesis is that the complexity found in organisms is the product of natural selection and, therefore, not the work of a creative "watchmaker."

In this paper, I am going to examine Dawkins' project and eventually conclude that he fails. I am not necessarily arguing against evolution, but criticizing Dawkins' attempts to show the plausibility of evolution and discredit all belief in an omnipotent creator.

II. Paley and the Design Argument

It is widely agreed that the design argument has been influential in Christian thought. Dawkins claims that the design argument is at the foundation of most people's faith. As Dawkins writes in "The Improbability of God," "why do people believe in God? For most people the answer is still some version of the ancient Argument from Design."¹ A design argument for the existence of God would be any argument that tries to prove the existence of an ultimate creative being from the idea that at least part of the universe

exists in such a way that it is probable that it was designed by intelligence. Let us examine the traditional paradigm for the design argument, the argument constructed by the great natural theologian, William Paley.

Paley's argument starts with a famous illustration. To paraphrase, if a man was walking across a field, and he came upon a rock, he would have no reason to suppose that anyone had ever put that rock there. On the other hand, if a man came across a watch in a field, he would automatically assume that some person placed it there. This seems obvious, but why? What is the difference between the rock and the watch? The fundamental difference is that the watch shows great complexity, while the rock is relatively simple. The intricate relationship between each of the gears and widgets is far too improbable to leave to chance. Therefore, when we come across something complex like a watch, we assume that the watch had a creator. In other words, for every watch there must be a watchmaker.

Paley then claims that there are things in the universe that are vastly more complex than watches. His favorite example is the eye which is a million times more complex than even the Hubbell telescope. Thus, if the watch's complexity posited the need for a creator, then something (with far greater intelligence than human beings) must have created the universe and the particular things in it, like eyes. Kenneth Nelson simplifies Paley's argument in the following manner:

1. The natural world displays intricate order.
2. It is similar to, and even greatly exceeds in intricacy, the ordered artifacts that human intelligence can produce.
3. So, by analogy, the natural world likewise was probably made by a very intelligent creator.²

Nelson presents Paley's argument as an argument from analogy. There is intricate order in the universe, and this order is similar to the order found in contrivances. Therefore, because contrivances are created by intelligent beings, an intelligent being also created the universe. Two important aspects of this argument are probability and analogy. This argument is not trying to prove the certainty of God's existence. It is simply claiming that from the state of the universe, it is probable that an intelligent being was responsible for its creation. Secondly, Paley's argument rests on an analogy. As Victor Nuovo explains, "The analogy of contrivances becomes the sure foundation of natural theology."³ The analogy stands that particular things in this universe are like contrivances, and contrivances have a creator; therefore, the universe has a creator. Contrivances are simply created things, which perform a function. Paley compares contrivances like telescopes to natural things like eyes. Paley's argument lives and dies with this analogy.

III. Darwin and Evolution

Many philosophers have attempted to discredit Paley's argument. For example, Hume attacks the analogies and the nature of a creator if the design argument is true. Kant claims that the design argument is somehow dependent upon the ontological argument, which he has rejected, but for the most part, versions of the design argument have survived these criticisms. But over the past fifty years, the design argument has been under fire stemming from a new criticism. Many people, like Victor Nuovo, believe that

Paley's argument cannot survive Darwin's theory of natural selection. Thus Nuovo writes that "Paley was defeated neither by Hume nor by Kant, but by Darwin, Darwin did this by replacing Paley's analogy with another that accounted for the origin of species and natural contrivances in a way that made theism superfluous."⁴

Darwinism has established itself in the academic world, and Darwin's theory of natural selection is the prevailing school of thought. David Stove makes the claim in his article, "So You Think You Are a Darwinian?" that "most educated people now are Darwinians, in the sense that they believe our species to have originated, not in a creative act of the Divine Will, but by evolution from other animals."⁵ I am not going to explain Darwin's theory in detail because I am mainly concerned with the philosophical elements of Dawkin's work. I am not attacking Darwin's biology. I am criticizing Dawkins' philosophical moves.

Dawkins' provides an analogy to help understand the basics. He compares evolution to an arms race, like the arms race between the United States and the Soviet Union during the Cold War.⁶ First of all, the whole theory depends on natural selection. Natural selection claims that occasionally one member is born with a mutation, which makes him more likely to survive and bear children than another member of the same species without this mutation. For example, the ancestor of modern day turtles was born with some sort of shell, which protected it from some species of predators. It was therefore more likely to survive and reproduce, and some of his offspring will have this mutated gene. Eventually the gene will become a dominant trait throughout the species, forming a new "improved" species of turtles. The arms race metaphor comes into play when two species are competing for survival. Antelopes got faster to avoid cheetahs, so one day a cheetah was born with spots that enabled it to sneak up on antelopes. The basic idea of Darwin's theory is that over the billions of years that this earth has been in existence, species have been in competition with each other and amongst themselves, producing more complex species.

I will return to some of these ideas later, but the important thing to note now is that many people believe that Darwin has destroyed the design argument. Remember that Paley's argument depends on the strength of his analogies. Victor Nuovo claims that "even when well used, however, conclusions drawn by analogy are only probable, and they are subject to recall when there is new knowledge that contradicts them."⁷ Darwin's theory produced new information, so the question that remains is whether the information which science is providing about evolution disproves Paley's analogies. Many people think that it does. I have already shown what Nuovo thinks. Ernst Mayr holds that "Darwin refuted the belief that diversity of organisms found on earth was the result of creation."⁸ Even Darwin himself thought that his work refuted Paley. As Darwin wrote in the *Origin of Species*, "the old argument of design in nature, as given by Paley, which formerly seemed to me so conclusive, fails, now that the law of natural selection has been discovered."⁹

It is impossible for me, in such a limited work to discuss all the different versions of Darwinism and whether or not the design argument can withstand their criticisms. Therefore, I am going to limit my discussion to Richard Dawkins' attempts to reject the

design argument and discredit the belief in a supreme creator.

SECTION TWO

I. Dawkin's Project

In *The Blind Watchmaker* and "The Improbability of God," Dawkins sets out to accomplish several things. His main focus is to show that evolution reveals a universe without design. Dawkins is writing for a popular audience. He does not use technical vocabulary or refer to works that a moderately educated person would not recognize. Many people claim that Dawkins provides a persuasive account of Darwinism that popular culture can understand. Referring to *The Blind Watchmaker*, Michael Ruse says, "if you do not accept Darwinism after reading this book, you never will."¹⁰

Dawkins starts at the same point that Paley began. There is great complexity in the world. Dawkins explains the vast complexity in nature in great detail, and just like Paley, Dawkins claim that such complexity needs an explanation whereas the existence of a stone would not. In *The Blind Watchmaker*, he argues that "complicated things, everywhere, deserve a very special kind of explanation."¹¹ Dawkins defines a complex thing as "something whose constituent parts are arranged in a way that is unlikely to have arisen by chance."¹² To understand this, we can use Paley's favorite example. If someone was to throw all the components of a watch in a box and shake it up, there is next to no chance that the product would tell time. For Dawkins, the same applies to animals. In "The Improbability of God" he states that "we can safely conclude that living bodies are billions of times too complicated, too statistically improbable, to have come into being by sheer chance."¹³ Again, Dawkins and Paley agree that complex things, like watches and whales require explanations other than random chance.

The difference comes in their explanation of the complexity found in nature. Dawkins claims that people like Hume were right to criticize Paley's analogies, but "he (Hume) did not offer any alternative explanation for apparent design."¹⁴ Now that Darwin has given us his theory of natural selection, we have an alternate explanation. Remember that arguments by analogy need to be reevaluated when there is new information. Dawkins claims that evolution shows that watches and organisms are not as similar as Paley believed. In fact, the analogy is only strong because watches were created by an intelligent agent, and evolution shows that organisms were formed through natural forces. Dawkins explains the breakdown of the watchmaker-contrivance analogy in the introduction of *The Blind Watchmaker*. Watches are not like organisms because watches are created by beings with goals and other characteristics of intelligence. Organisms were formed by "blind" forces. Dawkins argues for the unintelligent nature of evolution in the following passage:

The analogy between telescope and eye, between watch and living organism, is false. All appearances to the contrary, the only watchmaker in nature are the blind forces of physics, albeit deployed in a very special way. A true watchmaker has foresight: he designs his cogs and springs, and plans their interconnections,

with a future purpose in his mind's eye. Natural selection, the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form of all life, has no purpose in mind. It has no mind and no mind's eye. It has no vision, no foresight, no sight at all. If it can be said to play the role of watchmaker in nature, it is the blind watchmaker.¹⁵

As Paley claims, Dawkins holds that organisms could not have just "happened" by chance alone. But, the forces that caused the complexity in organisms do not have intelligence; this complexity was caused by natural selection, which does not have foresight, purpose, or any of the other characteristics of intelligence. He reiterates this point in *The Blind Watchmaker* when he states that "natural selection is the blind watchmaker, blind because it does not see ahead, does not plan consequences, has no purpose in view."¹⁶ In other words, if Darwin is right, then watches are not similar to living organisms, and therefore, Paley's argument falls apart because there is a better explanation, better in the sense that it explains reality better.

Thus, Dawkins must show that Darwin is right, or at least show that Darwinism is plausible and a better explanation than creation. Dawkins has to persuade people that men really came from bacteria. Furthermore, he has already concluded that explanations that rely on too much chance are not acceptable for explaining complexity. If it was, then we could simply claim that watches are not made; they just "happen." Therefore, Dawkins has to show his reader that it is not unrealistically improbable that the organic world as we know it today, from antelopes to zebras, was formed by natural selection. If he accomplishes this, then he believes that the design argument is sunk and that he can even discredit theistic belief.

II. The Importance of a Gradual Process

As Dawkins observes in *The Blind Watchmaker*, evolution did not occur in one giant step but "by gradual, step-by-step transformations from simple beginnings, from primordial entities sufficiently simple to have come into existence by chance."¹⁷ It is not as if an amoebae one day mutated into a chimpanzee. This process took place over billions of years with a large amount of intermediate steps. These intermediate steps were species which most likely do not still exist.

The main issue in this section is believability. Evolution cannot be the process of blind chance, or we cannot accept it as an explanation for nature's complexity. But Dawkins attempts to show that evolution is not the product of blind chance, as shown in the following passage from *The Blind Watchmaker*: "chance is only a minor ingredient in the Darwinian recipe, but the most important ingredient is cumulative selection which is quintessentially nonrandom."¹⁸ The ultimate determining factor in natural selection is not chance, but the ability of an organism to survive. Yet, Dawkins has to do more than show that evolution is based on more than just chance. He has to show that the probability of evolution occurring as it did is low enough to accept.

One of the ways that he does this is to prove that natural selection is a form of cumulative selection, not single step selection. Single-step selection would be where something changed from thing A to thing B. Cumulative selection has a natural sieving process that brings about intermediate steps between thing A and thing B. Dawkins believes that if he

can show that the steps between the stages of cumulative selection are small enough, the whole process is a justifiable explanation for the apparent order in the universe. He tries to show how "a whole series of tiny steps, each one small enough to be a believable product of its predecessor, occurred one after the other in sequence."¹⁹ To accomplish this, he uses two metaphors, which have become famous.

The first metaphor is the typing monkeys, which tries to illustrate the distinction between single-step selection and cumulative selection. This illustration's main goal is to show that phenomena that are practically impossible in one step can become almost a sure bet through cumulative selection. Dawkins picked a passage from Shakespeare's Hamlet, "Methinks it is like a weasel." He then figures the probability of a monkey typing this phrase (using only capital letters and spaces) is something around 1 in 10,000 million million million million million. This would be a form of single-step selection. A monkey randomly typing the twenty-eight character phrase is next to nothing. A monkey could type its entire lifetime and still only have a one in a trillion chance of typing the correct phrase.

Dawkins then creates a computer program that deals with the same scenario, but with cumulative selection. It starts with 28 random characters, then "the computer examines the mutant nonsense phrases... and chooses the one which, however slightly, most resembles the target phrase, METHINKS IT IS LIKE A WEASEL."²⁰ In other words, the computer program recognizes characters or sets of characters which are like the target phrase, keeps them, and replaces the others with another set of random characters. With every following generation, the phrase looks more like the target, until it reaches it. Dawkins discussed three trials where the target was reached in forty-one, forty-three, and sixty-four generations. Assuming that a monkey could write six phrases in an hour, he would normally be done in an average workday; instead of the monkey in the first scenario who could work continuously for its entire life and still not have a prayer of reaching the target phrase.

The idea is that natural selection is more like the second scenario. Species do not make large, random jumps through evolution. Instead, they make small changes, which are kept because they are more likely to survive with such an adaptation. Over a large span of time, these mutations are accumulated, and something entirely different exists. Now, Dawkins realizes the limitations of this illustration. In both scenarios, there is a target phrase, which is the criterion for success. For evolution, there is no such end goal. If there were, then that would imply a divine creator who programmed the goal into nature like Dawkins programmed the target phrase into his computer program. Thus he writes that "there is no long-distance target, no final perfection to serve as a criteria for selection."²¹ The criterion is reproductive success or survivability, not a final goal; therefore this metaphor has its limits.

Dawkins' second analogy tries to get around the first analogy's limitations. Dawkins wrote a second computer program, which he referred to as "biomorphing." Basically, the computer would draw a picture, which look sort of like a tree. These trees would "reproduce" bearing several offspring for every "parent", and the computer would mutate

each of the offspring. There were nine different "genes," which governed different properties of the picture. Some genes controlled height, and others controlled how many branches would stem off from each line. When the figure reproduced, the computer would randomly select one of the genes and change its value. This would alter the picture in some way. For every generation, the computer would produce several different offspring, and Dawkins would represent natural selection by choosing one of them. This "biomorphing" would produce incredibly intricate pictures that barely resemble the simple tree-like ancestor. Some of them even look like things in our world, like a bat or a lunar module.

Again, this illustration is meant to show the effectiveness of cumulative selection. From very simple beginnings, incredibly complex images could be created through a succession of mutations. And this analogy does not have a set goal or target, like the monkey analogy. In the following passage from *The Blind Watchmaker*, Dawkins explains the purpose of this illustration. It shows how complex results can be the product of a nonintelligent cumulative process:

The point of the story is that even though it was I that programmed the computer, telling it in great detail what to do, nevertheless I didn't plan the animals that evolved, and I was totally surprised by them when I first saw their precursors. So powerless was I to control the evolution that, even when I very much wanted to retrace a particular evolutionary pathway it proved all but impossible to do so.²²

But Dawkins still sees two fundamental limitations in this analogy. First of all, the computer program causes a mutation with every reproduction, when in reality, the mutation rate is less than one in a million. Dawkins admits that this mutation rate "is a distinctly unbiological feature of the computer model."²³ But the reason he made the mutation rate so high is that he, nor any other human, would have the patience to sit through a million mutations. As humans we only see a minuscule section of biological time, so he had to speed up the process.

Secondly, this program depends upon artificial selection, not natural selection. Dawkins claims that this program "shows us the power of cumulative selection to generate an almost endless variety of quasi-biological form, but it uses artificial selection, not natural selection."²⁴ If evolution were based on artificial selection, it would require an external arbitrator, i.e. God. Dawkins' excuse for this is that it was beyond his computer programming skills to include all the complexities of the biological world. For example, if a mutated organism dies before it reproduces, then it cannot contribute to the evolutionary process, and the mutated gene dies with it. There are so many factors in natural selection that it would be very difficult to make the computer's selection similar to natural selection. Therefore, he used his own selection to represent natural selection because the main purpose of this analogy was to illustrate the power of cumulative selection.

Dawkins believes that through these analogies he has shown that incredible results can be caused by small steps. Therefore, while it may be improbable for a human being to have mutated from bacteria, through small intervals and cumulative selection, the process becomes more plausible. Evolution is the continual procession of mutations, which are small enough not to be inconceivable.

III. The Probability of Evolution

But even if we can conceive the possibility that small mutations can cause incredibly complex organisms, that does not mean that it is plausible. Some people claim that such mutations are possible, but that the probability of them occurring in the way that they did is too small to be a justified explanation for the existence of biological complexity. Therefore, Dawkins has to be able to make the improbable probable. He has to show why it is not inconceivable to claim that such a rare occurrence happened on this planet.

Dawkins admits that the probability of the advanced state of evolution, which we currently have on our planet is very, very low. There are a great number of separate factors that are all highly improbable. And as we all know, probabilities of a chain of events multiply together. For example, if the probability that the first fish would form a lung that would help it survive is .01 percent, and the probability that this fish skin mutate to having skin that could survive the sun is .01 percent. The probability that both of these events occurred is not .02 percent, but .001 percent. This only takes two events into consideration, and as Dawkins claims there is an immense amount of small steps that occurred between the first single cell organism and human beings.

Furthermore, there are so many other things that could go wrong. For instance, the first fish with its small lung would have to survive long enough to reproduce, and in the natural world, that alone is very improbable. Also, the fish has to be put in situations where this lung would help it, like being stuck in a mud puddle. If such situations never occurred, then the fish with a lung has no greater chance of surviving than a fish without a lung, so evolution is stagnant. All of these outside factors lower the probability down even farther. And again, just as we cannot assume a watch formed from iron ore naturally, we could not accept such a low probability.

But for Dawkins, this low probability does not present a problem for Darwin's theory. First of all, he estimates that the upper limit of the chance involved is 1 in 100 billion billion, which seems like an incredible number. But these odds become much more reasonable over the span of geologic time. Scientists have estimated that the first organisms came into existence a billion years ago, so there is a billion years for evolution to work with. Furthermore, we are not the only planet in the universe. Earth may be the only planet in our solar system that could support life, but there are countless stars, each with its own set of planets. Dawkins claims that there are over a billion billion planets that could possibly support life. Therefore, on a billion billion planets there is a billion years for each one to possibly have complex organisms. Basically, Dawkins paraphrases his move by claiming that "given infinite time, or infinite opportunities, anything is possible."²⁵

Really, Dawkins thinks that this is a moot point. He believes the probability is much lower than one in a billion billion. He thinks that once life begun, natural selection is such a strong force that the evolution of intelligent life is almost inevitable:

My personal feeling is that, once cumulative selection has got itself properly started, we need to postulate only a relatively small amount of luck in the subsequent evolution of life and intelligence. Cumulative

selection, once it has begun, seems to me powerful enough to make the evolution of intelligence probable, if not inevitable.²⁶

In conclusion, Dawkins knows that "we can accept a certain amount of luck in our explanations, but not too much."²⁷ He believes that the amount of luck involved in evolution as an explanation is relatively small, but even if you think it is larger, there is enough geologic time on enough planets to make almost any improbable event reasonable.

IV. Addressing Potential Problems

Once Dawkins has illustrated the gradual nature of evolution and the probability of Darwin's theory, he believes that it is, at least initially, a possible explanation for the existence of complexity in organisms. But for it to be considered the correct explanation, it has to withstand an onslaught of objections and criticisms. Dawkins tries to address several of them.

A. One problem that faces the evolutionist is the origin of DNA. In *The Blind Watchmaker*, Dawkins admits that "modern heredity is based on DNA code, which is itself far too complicated to have sprung spontaneously into being by a single act of chance."²⁸ In other words, the complexity found in DNA needs an explanation as much as the complexity of organisms does. Natural selection needs DNA or something functionally equivalent. Without a medium for genetic reproduction and mutation, there can be no evolution. Therefore, evolution cannot explain the origin of DNA because DNA is necessary for evolution. But, Dawkins thinks that the process for the formation of DNA is similar to the way in which organisms evolved, through reproduction and a form of selection.

He presents a theory, which was actually founded by a biologist named Cairns-Smith. He guessed that the original replicators were crystals found in clay or mud. Dawkins does not hold this as the only possible solution. But there must have been some form of replicator, which was simple enough to have come about by chance. The definition of a replicator is something that makes copies of itself. The first replicators were formed by physical laws and were more simple than DNA. Crystals in clay is just one possible form of a basic replicator.

The idea is that crystals grow like flowers and reproduce themselves on an atomic level. Crystals that replicate themselves efficiently are more abundant than those which do not. For example, well-replicated crystals will form together at the bottom of a stream. Over time this process became more complicated until some precursor to DNA was formed.

I admit that I do not understand the physics behind this theory, but Dawkins does not present the process in detail. Once he explains how the crystals reproduce, he just assumed that they would become more complex and form DNA. On his behalf, this is just a tentative theory that is not his own. He has another theory called the "selfish gene" theory. I have never read his other theory, but I did read several critiques of it. For simplification, I will stick to the one he presented in *The Blind Watchmaker*.

B. Dawkins dealt with many objections, but I am only going to discuss two. The second deals with what he perceives as the most common objection to evolution, which he refers to as the Argument from Personal Incredulity. Arguments from Personal Incredulity say things like "it is hard to see how evolution happened as it did" or "I cannot accept the idea that the human mind in all its magnificence was formed from bacteria." Dawkins contention is that these are not real arguments at all but statements about the speaker's confusion. Dawkins claims that this attempt to attack evolution " is not an argument, it is simply an affirmation of incredulity."²⁹ Without coming out and saying it, he is claiming that an objector's stupidity or reluctance to accept a position does not say anything formidable about the theory at hand.

IV. The Denial of God

Dawkins' attack on theism is at the crux of this work. He has shown that evolution becomes a realistic explanation through cumulative selection and the almost infinite amount of possibilities. Now, he wants to prove that because of evolution, theism is no longer a defensible position. And he believes that he has accomplished this. As Ric Machuga said, "Richard Dawkins is absolutely confident that science will finally accomplish what philosophy has been unable to do in more than 2,000 years-make theism intellectually indefensible."³⁰ Dawkins makes many confident statements about God, which shows how sure he is that theism is an absurd position. In the following two passages from "The Improbability of God", you can see some of his personal views towards theism:

In (belief in a supreme creator) has all been a gigantic waste of time and a waste of life. It would be a joke of cosmic proportions if it weren't so tragic.³¹The evidence for evolution is so compelling that the only way to save the creation theory is to assume that God deliberately planted enormous quantities of evidence to make it look as if evolution had happened.... Does anybody want to worship a God capable of such trickery?³²

But Dawkins thinks that he has an argument that justifies such remarks, which is based on the assumption that explanations that posit complex causes do not deal with the problem at hand, and since God is an infinite being, he has infinite attributes and qualities; therefore he is infinitely complex:

By definition, explanations that is built on simple premises are more plausible and more satisfying than explanations that have to postulate complex and statistically improbable beginnings. And you can't get much more complex than an Almighty God.³³

The explanation that theists, like Paley, use to explain complexity is based on a complex creative God. Therefore, theists assume the very thing that these explanations are trying to resolve, complexity. They are using a complex thing to explain complexity. Dawkins assumes that all complex things need a special kind of explanation. Organic complexity is an example, but the explanation for organic complexity could not rely on another complex substance because it would need a special explanation of its own. Furthermore, just as the complexity in nature could not have just come into existence, the same would hold true for a complex god. As Dawkins argues in *The Blind Watchmaker*, "the same applies to the odds against the spontaneous existence of any fully fashioned, perfect and whole beings including-I see no way of avoiding the conclusion-deities."³⁴ Basically, creationists are postulating a complex being as the basis of organic complexity, and if we are content with such an easy way out, then why were we not content with postulating

organic complexity without any explanation in the first place?³⁵ Since natural selection is based on simple natural forces, then according to the above assumption, evolution replaces Paley's analogy as a better explanation for the existence of complexity in the universe.

Dawkins holds that evolution has replaced God as the only acceptable explanation for complexity, and since it claims to be such an explanation, Dawkins argues that "the Argument from Design, then has been destroyed as a reason for believing in God."³⁶ The Argument from Design is at least wrong, and at best superfluous. Although Dawkins does not claim to disprove the possibility of God, God has no part in the creation of organisms unless he is so distant that he becomes irrelevant. Therefore, if most people believe in God because of some form of the Argument from Design, then the foundation for most theistic belief has been destroyed. Remember that analogies need to be reevaluated when new information is introduced. Dawkins has attempted to show that Paley's analogy is faulty. Paley is destroyed because he assumes what he tries to explain (complexity), and a better solution has been given by Darwin. He needs to negate the old analogy and uphold a new one as better, and if he succeeds at both of these, then Paley has been successfully refuted.

SECTION THREE

I. General Remarks

I am not quite sure that Dawkins accomplishes either of those objectives, rejecting the theist's explanation or presenting an alternative. In this section of my paper, I am not going to attempt to disprove evolution. As Kenneth Gallagher put it, "we ask not, 'Is Darwin right?' but, 'Does Dawkins' argument make it plausible that Darwin is right?'"³⁷ In other words, I am going to evaluate Dawkins on a philosophical level, and not on a biological level. I am also going to question his conclusion that evolution makes belief in God indefensible. On his behalf, Dawkins is not a philosopher. He is a biologist and is writing to a popular audience on a complex topic, but he makes philosophical moves (possibly the biggest philosophical move in history if he has rejected the existence of God). Therefore, he has to have a strong position or his moves are nothing more than persuasive falsities. I hold that Dawkins does not accomplish what he set out to do.

II. Misleading Metaphors

I will begin with Dawkins' two metaphors that try to show the plausibility of evolution. My contention is that they do not say anything substantial about evolution at all. I will be relying on an article by Kenneth Gallagher, entitled "Dawkins in Biomorph Land." Let us begin with the monkey at a typewriter. Gallagher claims that "while the model is offered as a means to make natural selection more palatable, it is clearly not analogous to natural selection at all."³⁸ The main reason for this is the same fault that Dawkins admitted. The analogy requires a future goal, but there can be no future goal without positing a creator. Dawkins claims that the purpose of this illustration is to emphasize the difference between single-step selection and cumulative selection.

The model is not helpful to Dawkins' project for two reasons. First of all, the difference between the two types of selection does not need to be emphasized because it is common sense. If we take Dawkins' purpose for this model seriously, he is trying to remind us that things that occur in small steps that build upon one another are more feasible than things that occur in one big step. No one believes a skyscraper was formed in one step. Even small children with legos realize that cumulative processes are more feasible than single-step processes. Why does Dawkins need to spend so much effort to tell us something that everyone already assumes? Furthermore, this model also emphasizes the problem at hand: as Gallagher put it, "the problem is: is it really plausible to think that there is any way that nature could provide selective influence without looking into the future?"³⁹ Dawkins is trying to prove that there are no future goals in nature. In fact, that might be the only way to rule out creation as an explanation for complexity in the universe, yet Dawkins presents this analogy, which fails for the same reasons that creationists would claim that evolution fails. An analogy that uses target goals to try to disprove target goals is not very helpful.

Dawkins claims to have done a better job with the second analogy, inasmuch as he has gotten rid of the projected target. In his Biomorph program, there is no picture that marks success. Success is found in the complexity of the pictures created by the program, but again this analogy does not get around the problem of assuming a creator. First of all, the instructions for mutation and the types of mutations are all a result of an outside intelligence, namely Dawkins. Thus Gallagher writes, "the instructions for its branching were not hidden inside it, but in the mind of the programmer, or at most in the program he wrote."⁴⁰ In this model, Dawkins is the watchmaker of his biomorphs, so again he does not escape the problem he is trying to solve. Gallagher argues that "if someone were struck by the final form of the biomorphs and inferred that there must be a designer to account for the regularity he perceived, he would not be wrong: the only order present, the symmetry and the constraints on replication, have been designed."⁴¹

Furthermore, the Biomorph is nothing like evolution, which makes it an ineffective metaphor. Evolution requires natural selection, and natural selection requires some type of function. There has to be something which makes some mutations continue and others die out, and according to evolutionists, this is an organism's ability to survive and reproduce. This is essential to evolution. Biomorphs do not do anything. They have no function. To quote Gallagher, "since they are functionless and do absolutely nothing, they appear to cross no qualitative barriers, and it is not a great strain to think of their successive alterations as arising by chance."⁴² There is nothing in the program that weeds out certain mutations, no natural selection. This model does not represent evolution, more than reemphasizing the benefits of cumulative selection, as if that was needed. The only selection that occurs is done by Dawkins, an outside intelligence.

Just to drive this point home, let me indicate that Dawkins really believes that he did something significant with his Biomorph analogy. Remember how he claimed that he was totally surprised by the results of the program. First of all, he was only surprised because they looked like things that his intelligence recognized as similar to an object, but there is no outside frame of reference in evolution. Secondly, my response to his

surprise would be: "Why are you surprised when you programmed functions into a program which depended on random outputs?" That would be like telling someone to give me a random number and being surprised with his answer. Dawkins programmed randomness into his program, so his program produced infinitely varying results.

Basically, these analogies are not helpful to Dawkins project for two reasons. First they do not represent reality. Again quoting Gallagher, "although intended as striking way of rendering Darwinian theory more accessible, they are seriously defective as a simulacra of biological reality and hence cannot shed much light on it."⁴³ Secondly, both metaphors rely on a creator with intelligence outside of the metaphor itself. Therefore, they do not escape the problem that Dawkins is trying to solve. In short, he wants to claim that these models help show why natural selection is plausible, but they cannot show us how natural selection would occur.

III. The Improbability of Intelligent Life

Ernst Mayr is a famous biologist, who is also a committed Neo-Darwinian. Mayr and Dawkins are trying to accomplish the same thing, reveal evolution as truth. Both also believe that evolution has destroyed the Design Argument. I am not going to discuss Mayr's presentation of evolution. Instead, I am going to use Mayr against Dawkins. I believe that Mayr's position is more complete and thorough than Dawkins', but for now, I am only concerned with what he says about the probability of evolution. Remember that Dawkins believed that once evolution got started, it was almost a sure thing that advanced intelligence would eventually evolve. Mayr is much more skeptical.

Dawkins used the fact that there were billions of stars and even more planets that could have produced evolved organisms. Mayr disagrees. There are so many conditions that must occur in just the right order for the origin of life to be even possible on a planet. Even though there were billions of planets to start with, "the total set of prerequisites for the origin and maintenance of life drastically reduce the number of planets that would have been suitable for the origin of life."⁴⁴ Mayr goes on to admit that it is probable that there is not a single other planet in the universe where the conditions were all present and evolution could begin. Furthermore, the probability of intelligent life to have evolved is far less than Dawkins imagined. Mayr is struck "by the incredible improbability of intelligent life to have evolved, even on earth."⁴⁵ To support this claim, he shows that out of the billions of species on earth, only one has produced a high form of intelligence. Therefore, we cannot assume that it was forthcoming like Dawkins believed. Human beings are an incredibly unique occurrence.

It is clear that not all evolutionists agree that evolution is even remotely probable. I am not going to discuss how they get around that because I am focusing on Dawkins. Dawkins claims that the improbable is made probable through almost infinite possibilities, but according to Mayr, there are very few possibilities since there are fewer planets that could support the evolutionary process. But even if there were more opportunities, that does not affect the theist belief in God. To prove this, let us say a man was stranded on a deserted island. When he was exploring, he found the word "Hello"

written in stones on the shore. Even though it is possible that the tide arranged the rocks in that way, the man is going to instantly assume that there is intelligence on the island. Why, because it is highly improbable that the tide wrote "Hello". One might argue that there are millions of beaches where tide has been moving rocks for millions of years; therefore, at some point the word "Hello" is bound to be written on a beach. That may be true (although Mayr says it is not for evolution), but the man is still justified in his belief. Even if there were grooves in the beach that made the writing of "Hello" more probable, I know that if it were me, the thought that it just happened by chance would never even cross my mind.

Furthermore, the argument from infinite possibilities does not make something probable; it makes it possible. It does not say how likely an event is; it says that if there are almost infinite possibilities surely event X "must" have happened at least once. The problem with that argument is that it could be argued for anything. There must be a world where life is formed from silicon and not carbon, or where there are pink elephants. I admit that Dawkins does not say that there are infinite possibilities, but the argument is the same. Furthermore, even if he shows that it could have happened, he has failed to prove that it did happen. He has to show what qualities the universe has that implies that it was not created by intelligence, but I will discuss that later in the paper. Dawkins has failed to show me that evolution is plausible through probability.

IV. Now what about God?

So far, I have shown why his metaphors do not accomplish what he hoped that they would and put into doubt his assurance that evolution was a probable event. I admit that I had to rely heavily on Mayr's works because I do not know enough about the biology of evolution to discuss its probability. Also, many people take issue with Dawkins's account of the origin of DNA. He leaves a lot of unanswered questions like whether DNA could function unless there are cells that can read it. It is like a book. It is useless without a reader. I personally doubt that clay was the foundation of life, but again I am not an expert on replicating crystals. Now, the rejection of God is a philosophical move, and one that I hope to show he is not entitled to make.

Many philosophers argue that Dawkins makes the mistake of arguing for things because evolution demands it. Gallagher, for example, writes that "in the long run the argument comes dangerously close to the view that things must have happened this way, since the theory of natural selection demands it."⁴⁶ Going back to the issue of the origin of life, Dawkins himself admits that all he can do is speculate on how it had to happen. Dawkins writes that "this chapter has had the modest claim of explaining only the kind of way in which it [the origin of life] must have happened."⁴⁷ Unfortunately he is trying to show why natural selection is true, not what must have happened if natural selection is true. Machuga interprets Dawkins as saying, "Well, I don't know how life originated, but I know God isn't a good explanation."⁴⁸

Kenneth Nelson argues that "if evolution did undermine the argument from design, there must have been something about the particular mechanisms that science discovered that

suggests non-intelligence.”⁴⁹ But that is not Dawkins’s argument. Dawkins illustrates the basics of the Darwinian account of evolution, but he does not at each point explain why scientific facts have ruled out an intelligent creator. Instead, he lets both explanations for complexity stand, and at the end, he rules out creation as a weaker argument. The basis for such a move is his argument from simplicity. Creation posits a complex infinite creator to explain complexity; therefore it does not escape the problem that it is trying to explain. Evolution, on the other hand, has explained organic complexity on the basis of simple physical forces. Therefore, evolution is a better explanation.

Dawkins provides two arguments for why his “simple” explanation is better. The first argument relies on the definition of complexity that he used in the introduction of *The Blind Watchmaker*. Dawkins has already defined a complex thing that needed a special explanation as “something whose constituent parts are arranged in a way that is unlikely to have arisen by chance.”⁵⁰ A complex thing is a composite, a heterogeneous structure. Dawkins uses “complexity” with a very specific meaning throughout the book. He does not mean complex purposes or intentions. For example, a rock is a simple thing, but it can be used for almost infinite purposes. Things that display complexity in its intricate parts, e.g. watches or eyes, need special explanations. Things that do not display this specific type of complexity do not need explanations. Rocks may be complex in purpose and the composition of atoms, but it does not have intricately interacting parts. Therefore, rocks and other “simple” things do not need special explanations.

Dawkins claims that theism cannot explain complexity by positing God because God is a complex creature who needs an explanation of His own. Dawkins reminds us that complex things are things which could not have arisen by chance, and “the same applies to the odds against the spontaneous existence of any fully fashioned, perfect and whole beings including deities.”⁵¹ In *The Blind Watchmaker*, argues that theists “assume the existence of the main thing we want to explain, namely organized complexity.”⁵² In the same passage, Dawkins adds that “if we are going to allow ourselves the luxury of postulating organized complexity without offering an explanation,”⁵³ we should just go ahead and assume organic complexity without an explanation. In other words, Dawkins is equating God’s complexity to the type of complexity that warrants an explanation, and Dawkins has already defined such complexity. Therefore, according to Dawkins’s own definition of complexity, God has to be a composite. Dawkins never spells this out, but from his assertion that God needs an explanation because of his complexity, we must assume that he is referring to the same type of complexity, complexity of composition. If not, his objection would not have any merit because it is based on the fact that complex composites need an explanation.

Kenneth Gallagher paraphrases Dawkins’s objection as follows: “The God who was the author of complexity would have to be complex, and thus would need an explanation of the same sort he was supposed to provide.”⁵⁴ But there is a problem with assuming that God needs an explanation because only things with intricately interacting parts need an explanation, and God is not a composite. He has no parts. For thousands of years it has been argued that God is purely simple. Thus Gallagher notes that “beginning with the

Greeks and continuing through the main stream of western (if not world) philosophy, there has been an insistence on the Divine Simplicity as one of the attributes of the absolute being.”⁵⁵ Dawkins has not shown in what way God is a composite, and most philosophers have argued that he is purely simple. There are many different definitions of “complex” and “simple”, but I am using Dawkins’ definition of “complex” as a composite whose parts interact, “simple” as a substance that does not have interacting parts. Therefore, according to Dawkins own definition of complexity, God does not need an explanation in the same way as watches or rhinoceroses. Therefore, any argument which tries to claim that God cannot explain complexity because He has a specific type of complexity needing an explanation of his own cannot be used against theism because that specific type of complexity implies a heterogeneous structure, which God is not.

Gallagher holds that Dawkins’ feeble attempt to discredit belief in God makes it seem as if he really did not need to offer a good argument. Gallagher argues that “Dawkins does not do very much towards the application of his argument to this atheistic end, clearly feeling that once the explanation of organic complexity has been achieved by Darwinism any need to appeal to a deity is obviated.”⁵⁶ It is as if once Dawkins presents his version of Darwinism, it should be obvious that creation is absurd. But I think that there can be another legitimate argument that can be implied from both “The Improbability of God” and *The Blind Watchmaker*, which could possibly show why evolution is a better explanation for organic complexity than creation. Unfortunately, for Dawkins, this argument was never explicitly laid out, but it can be inferred and is stronger than the explicit argument that he provides.

This argument relies on a different understanding of “complexity.” It is an appeal to Ockham’s razor, which states that the simplest of two or more competing theories is preferable. Furthermore, unexplained phenomena should be explained by causes that we know or understand. In “The Improbability of God,” Dawkins writes:

By definition, explanations that build on simple premises are more plausible and more satisfying than explanations that have to postulate complex and statistically improbable beginnings. And you can’t get much more complex than an Almighty God.⁵⁷

The complexity that Dawkins is referring to here is not the specific definition in his first argument. It refers to metaphysical complexity. And I am willing to concede that God is much more complex than our minds could fathom and that He is more complex than the material state of the universe. In the previous passage, he is making a move similar to Ockham’s razor. Evolution is a better explanation (all other things being equal) than creation because its explanation is simpler. Natural forces, like natural selection, are simpler than an infinite creator.

Assuming that there are only two possible explanations, creation and evolution, Dawkins holds that the simpler of the two is a better explanation, and for the sake of argument, let us assume all other factors are equal. There are two explanations with equal explanatory power. Both explain organized complexity in a plausible and justified way. I will assume that the only difference is a matter of complexity. It is clear that creation is based on complex assumptions. Creation posits an infinite being who works in ways that we cannot comprehend. We know nothing about the causal powers of God. Evolution, on

the other hand, is relatively simple. It is based on mutations and survivability, two factors that we can understand through science. And instead of positing a God who works upon the physical world, evolution reduces the explanation to only the physical world. Organic complexity can be explained by physical forces alone; God is not necessary. Therefore, based on Ockham's razor, evolution is a better explanation than creation.

So where does that leave the theist? For the rest of this paper, I am going to assume that Dawkins was successful in convincing me that evolution is a valid theory supported by scientific data. This would be the best case scenario for Dawkins, but what does it mean for the theist? Well, let's start by asking what it does to the design argument. I think it is safe to say that if Ockham's razor is true then the Design Argument fails because it serves as an explanation, and if there is a better explanation then it no longer proves the existence of an infinite creator. Yet, it is important to note that Ockham's razor is not a self-evident axiom. It is a general methodological principle. In other words, it helps lead to more correct theories and explanations. But there must be exceptions where the simplest explanation is not the correct one.

My main criticism is that Ockham's razor rejects all theistic or religious explanations. Naturalistic explanations will always be better (if other factors are equal) than explanations that rely on supernatural causes because we can certainly understand scientific explanations better, and all religious explanations will posit a metaphysical substance other than the physical world. Therefore, if we uphold Ockham's razor, all naturalistic explanations are better than theistic explanations. Thus, when Dawkins appeals to Ockham's razor, he is begging the question. Dawkins is trying to show why evolution, a naturalistic position, is a better explanation for organic complexity than creation, a theistic position. When Dawkins assumes that simple explanations are better than complex explanations, he has assumed that any naturalistic explanation is better than any theistic explanation, but that is what he is trying to prove. He is trying to show that a particular naturalistic explanation is better than a particular theistic explanation. He cannot simply claim that all explanations of phenomenon that are based solely on scientific understanding of physical forces rule out any explanation which rely on physical forces and supernatural forces. Ockham's razor rules out all theistic explanations by limiting all acceptable explanations to science; therefore it begs the question.

But even if scientific explanations are necessarily better than theistic explanations, what would that accomplish? Primarily, the Argument from Design would be refuted (keeping the assumption that evolution is an adequate explanation). But the destruction of the Design Argument and evolution would not seriously challenge the existence or belief in God. The strongest claim that Dawkins could make is that belief is no longer justified. The basis for this move would have to be that a significant part of the reason most people believe in God is the Argument from Design. If people believed in God, and their belief was based on a faulty argument, then they would no longer be as justified in their belief in God. But I do not think that most people believe in God because of some form of the Argument from Design. I cannot speak for everyone, but the Argument from Design is

not the foundation of my faith. I believe in God because I have experienced God, not because I think that he is the only explanation for organic complexity. A successful refutation of the Argument from Design would not seriously affect justification of a belief in God.

Furthermore, it is very clear that nothing Dawkins has done challenges the existence of God. He admits that he "could not disprove beliefs like these."⁵⁸ Surprisingly, he still makes claims about God's irrelevance and rejection. Even if he could prove that evolution reveals a universe without design, that would not imply that God did not exist or that there are not justified reasons for believing that God exists. Even if he was completely successful at his project, he could only show that one reason for believing in God is no longer justified.

V. Conclusion

In summary, Paley and Dawkins both agree that certain types of complexity warrant explanations. Paley thought that organic complexity needed a creator, like mechanic complexity has a creator. Dawkins tries to reject Paley's explanation and provide a better one. Unfortunately, he relies on two metaphors, which do not accomplish what he intended. He thought they would show how natural selection could occur through small steps. Instead, they only show how things could be done in small steps, but they did not say anything about natural selection. He also thought that since there is over a billion billion planets, evolution does not simply become possible, but probable. Biologists like Mayr see evolution as a unique and highly improbable occurrence. Furthermore, he does not show that evolution is probable, but possible, and the universe still seems to display ordered creation.

His basis for rejecting creation is an argument that claims that since creation is trying to explain complexity and God is a complex thing, it tries to solve the problem by returning to the problem. Unfortunately, God, if he exists, is not a complex thing by Dawkins's definition. Complex things need explanations and are composites, but God is not a composite, but a simple substance. It could be inferred from Dawkins's project that he is appealing to Ockham's razor to reject creation as a suitable explanation. Unfortunately, that move begs the question because it assumes that all scientific explanations are better than explanations that rely on supernatural forces.

To successfully fulfill his project, Dawkins needed to show what qualities of the universe show formation without intelligence or the inconsistency in the idea that God created the universe. But he did not do either of those. Thus, Dawkins did not show that creation is a faulty explanation for organic complexity, which was his original goal. Again, I am only critiquing some of Dawkins's philosophical moves, not his entire project. But for his project to accomplish what he intended, to show why evolution reveals a universe without design, he must successfully defend his philosophical moves. The one argument he does give for rejecting creation as a suitable explanation is faulty, and the argument that could be implied begs the question.

In conclusion, I do not know how the Christian should react to evolution. I do not want to fall into defending the "God of the Gaps". I personally doubt that naturalists will ever be able to refute creationists. At the most fundamental basis for understanding, they disagree. One holds that supernatural powers have causal powers on the world. The other does not. Both of those claims are faith statements, and it is difficult for the two sides to communicate effectively because they both discredit the other by the very basis of their understanding. But, maybe it can be done. Maybe, evolution and science will somehow prove that the universe is without design. But it is clear that Dawkins has not ruled out the role of the Watchmaker.

END NOTES

¹"The Improbability of God" 1

²Nelson 423-424

³Nuovo 33

⁴Nuovo 47

⁵Stove 267

⁶*The Blind Watchmaker* 180

⁷Nuovo 36

⁸Mayr 193

⁹Sadowsky 97

¹⁰"Dawkins in Biomorph Land" 406

¹¹*The Blind Watchmaker* 1

¹²*The Blind Watchmaker* 7

¹³"The Improbability of God" 3

¹⁴*The Blind Watchmaker* 6

¹⁵*The Blind Watchmaker* 5

¹⁶*The Blind Watchmaker* 21

¹⁷*The Blind Watchmaker* 43

¹⁸*The Blind Watchmaker* 49

¹⁹"The Improbability of God" 3

²⁰*The Blind Watchmaker* 47-48

²¹*The Blind Watchmaker* 50

²²*The Blind Watchmaker* 65

²³*The Blind Watchmaker* 56-57

²⁴*The Blind Watchmaker* 60

²⁵*The Blind Watchmaker* 139

²⁶*The Blind Watchmaker* 147

²⁷*The Blind Watchmaker* 139

²⁸"The Improbability of God" 6

²⁹*The Blind Watchmaker* 39

³⁰Machuga 16

³¹"The Improbability of God" 1

³²"The Improbability of God" 5

³³"The Improbability of God" 6

³⁴*The Blind Watchmaker* 317

- ³⁵*The Blind Watchmaker* 317
³⁶"The Improbability of God" 5
³⁷"Dawkins in Biomorph Land" 500
³⁸"Dawkins in Biomorph Land" 503
³⁹"Dawkins in Biomorph Land" 504
⁴⁰"Dawkins in Biomorph Land" 507
⁴¹"Dawkins in Biomorph Land" 513
⁴²"Dawkins in Biomorph Land" 508
⁴³"Dawkins in Biomorph Land" 512
⁴⁴Mayr 69
⁴⁵Mayr 69
⁴⁶"Dawkins, Darwin, and Design" 242
⁴⁷"Dawkins quoted in Machuga" 16
⁴⁸Machuga 17
⁴⁹Nelson 429
⁵⁰*The Blind Watchmaker* 7
⁵¹*The Blind Watchmaker* 317
⁵²*The Blind Watchmaker* 316
⁵³*The Blind Watchmaker* 316
⁵⁴"Dawkins, Darwin, and Design" 244
⁵⁵"Dawkins, Darwin, and Design" 244
⁵⁶"Dawkins, Darwin, and Design" 243
⁵⁷"The Improbability of God" 6
⁵⁸*The Blind Watchmaker* 316

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