

Immanuel Kant describes himself as a “transcendental idealist;” and there is simply no transcendent idea greater than that of the Big Guy himself, God. The question of the existence of such a deity is one of his major concerns in the *Critique of Pure Reason*, in which he famously stated that he “had to deny knowledge in order to make room for faith” (B xxx), as it was throughout his entire lifetime of thought. One of the benefits of studying Kant in the twenty-first century is the incomparable perspective gained from being able to look back over the years that separate us. We can see how his ideas have played out in the arena of history—as we earnestly attempt to apply the lessons we learn to our own place and time.

The contemporary controversy over the teaching of intelligent design, a theory that an intelligent being is responsible for the existence and complexity of life on earth (in contrast to the prevailing Neo-Darwinian theory of evolution), offers us an excellent opportunity for just such an application of Kantian ideas. It is also quite intriguing from an historical point of view. Kant, of course, died decades before the H.M.S. Beagle set sail with its most famous passenger on board. What would he have thought of Darwin’s theory of evolution? Are Kant’s ideas still relevant today—or have scientific advances since then consigned his theory on this subject to the dustbin of history?

Having only studied Kant in depth over the course of this semester, I will not presume to know thoroughly the mind of the great man himself. All that I can claim to offer at this point is an overview of design arguments from their origin in times immemorial up to the intelligent design theory of the present age, followed by a discussion of Kant’s ideas in the *Critique of Pure Reason* and my humble attempt to apply these to the age in which we currently find ourselves. By doing so it is my earnest

hope that I can make a positive contribution by imparting some Kantian insight to the current acrimonious debate over the origins of life on earth.

In his discussion of the argument from design (which he refers to as the “physico-theological proof”) in the *Critique*, Kant states that it “always deserves to be named with respect,” because “It is the oldest, clearest and the most appropriate to common human reason” (A623/B651). Throughout its history, the idea that the cosmos is a product of the divine has had an impact on human thought that cannot be overstated. Stories in which the creation of the world as we know it is attributed to some form of intelligent agency are staples of an impressive array of cultures around the globe, being told and re-told since time immemorial.¹ These stories have been foundational to the development of worldviews within their respective cultures. Western civilization is certainly no exception to this.

Our most famous and influential creation narrative has been that of the Bible. The first chapter of the Book of Genesis, which is the beginning of both the Jewish Torah and the Christian Bible, tells the story of how God created the universe and everything in it, including all life on earth, *ex nihilo* (“from nothing”) over the course of six days. Although initially perfect (“very good” Gen 1:31), this creation was marred by human sin in the fall (Gen 3). This introduction sets the stage for everything that follows.²

The account of Genesis 1 gave rise to the notion that the world itself gives witness to its Creator. This idea is expressed poetically in Psalm 19; in the first verse of which the psalmist writes that, “The heavens are telling the glory of God; and the firmament

¹ The following website contains an excellent sampling of some of these creation myths with links to others: <http://crab.rutgers.edu/~goertzel/creationmyths.htm>

² The entire Bible can be understood as the history of God’s attempts to rectify the damage done to his creation by human sin, including the Law of Moses (e.g., the Ten Commandments) and (for Christians, at least) the person and work of Jesus Christ.

proclaims his handiwork.”³ In the New Testament this line of thinking is taken up most notably by the apostle Paul, who employs it to argue for the truth of the Christian message which he proclaimed (Acts 14:15-17; Rom 1:19-21). This concept—that the order of the cosmos conveys certain fundamental truths about the one who made it—is referred to as general revelation. These propositions are called ‘general’ in that they are non-specific and are thought to be available to all of mankind through our cognitive faculties.⁴ What they are said to reveal includes such information as God’s existence, his eternal power, and his moral nature.

On the basis of general revelation theologians have attempted to construct philosophical proofs for the existence of God.⁵ Of these, the one with which we will concern ourselves is the argument from design, also known as the teleological argument. This argument was first formulated by Thomas Aquinas in the thirteenth century as his Fifth Way of proving that God exists and can be summarized as follows: (1) things lacking intelligence nevertheless act towards ends; (2) whatever lacks intelligence can only act towards an end if it is directed by a being possessing intelligence; (3) therefore there exists an intelligent being by whom all natural things are directed to their end, i.e. God (*Summa Theologica*, First Part, Question 2, Article 3).

Partly in response to the criticisms of David Hume, this proof was further refined by one of Kant’s contemporaries, the Anglican theologian William Paley. In his book *Natural Theology* (which was first published in 1802) Paley develops what becomes

³ All Bible quotations are taken from the New Revised Standard Version (NRSV).

⁴ General revelation stands in contrast to the concept of special revelation, which comes directly from God through faith and is beyond the scope of reason and the material world alone. Examples of special revelation are the person and work of Jesus Christ (e.g., his resurrection) and the Bible, both of which are referred to as the “Word of God.”

⁵ These attempts have resulted in an array of different arguments. For more information on proofs for the existence of God see <http://www.newadvent.org/cathen/06608b.htm>

known as the watchmaker argument. Instead of resting on a simple analogy with objects of human agency (e.g., the universe is a mechanism like a clock), this argument is based on the concept of “functional complexity.” To explain his theory, Paley famously used the metaphor of a watchmaker. Imagine that someone were to find a watch and a rock lying next to each other on the ground—how would he or she be able to discern a substantive difference between the two? Unlike the rock, the watch exhibits the two distinguishing characteristics of functional complexity: (1) it performs some function that an intelligent agent would consider desirable; and (2) it could not perform said function if its constitutive parts and mechanisms were proportioned or arranged differently. Substitute the cosmos or a complex organism like a human being for the watch and the result is Paley’s design argument for the existence of God—the ultimate Watchmaker.

The greatest strength of arguments from design was the inability of any other theory to account for the complexity, variety, and ostensible purposiveness of nature, particularly that of living organisms. This would change when Charles Darwin published his theory of natural selection in *The Origin of Species* in 1859. Darwin’s theory was the first to explain plausibly the apparent teleology in nature without resorting to the design of an intelligent being. Natural processes such as genetic mutation and the struggle for survival, acting gradually over a long period of time, were thought to be sufficient on their own. Eventually, Darwin’s ideas were expanded into a grand naturalistic account of the origin of life on earth (Neo-Darwinism). Grounded in this worldview, some have gone from claiming that God is not necessary to arguing that he does not exist at all. An excellent example of this is the renowned evolutionary biologist Richard Dawkins whose latest bestseller, *The God Delusion*, requires no further elaboration.

However, some claim to have found problems with the prevailing Neo-Darwinian theory. These objections are grounded on complexity and probability. As science has advanced since Darwin's time, particularly the fields of microbiology and biochemistry, we have discovered that life is far more complex than had previously been thought. Structures such as the human brain have been revealed to be so staggeringly intricate that they appear to some to be beyond the limits of probability for the blind physical processes and random chance of Darwinian evolution to account for their existence. Even within single-celled organisms there are incredibly finely tuned structures, such as the bacterial flagellum, which evolution might not be sufficiently able to account for.⁶ Such structures are said by contemporary design theorists to exhibit a trait referred to as irreducible or specified complexity. As explained by one of these, William Dembski, specification refers to a low specificational complexity, i.e., that a pattern must be easy to describe in short order. Complexity refers to a high probabilistic complexity, which means having a probability less than the universal probability bound (around 1 in 10^{150})⁷, the boundary beyond which the factor of chance can be precluded from consideration (*The Design Revolution*, 81-86).

Given these characteristics, it is argued that specified complexity can only be the product of intelligence. This principle can be applied either to human artifacts like watches (or, more interestingly, the Antikythera mechanism) or to biological structures and processes like the bacterial flagellum. The source of this creative intelligence in the former case is readily understood as human beings; in the latter, on the other hand, it is

⁶ Recent studies have proposed plausible evolutionary pathways for some of these. E.g., see <http://www.millerandlevine.com/km/evol/design2/article.html>

⁷ This figure is derived from Dembski's estimate of "total number of specified events throughout cosmic history." Any event whose probability is less than this universal probability bound cannot be plausibly accounted for by chance.

claimed to be necessary to posit some other form of designing intelligence. Design theorists, however, do not make any claims about the nature of this being other than (1) it exists; (2) it possesses intelligence; and (3) it is somehow involved in the development of life on earth. Although this theory is certainly compatible with the Judeo-Christian concept of one God who created the cosmos *ex nihilo*, the two are not necessarily synonymous—any designing intelligence would suffice. Intelligent design is not so much a proof for the existence of God as it is an attempt to refute a strictly naturalistic understanding of biological origins.

Just from this brief overview it should be obvious that Neo-Darwinian evolution and intelligent design are fundamentally in conflict with each other. Both seem to present logically feasible explanations for the existence and complexity of life on earth on the basis of what is more or less that same data. So, what are we to think of this? Is it a conflict between truth and falsehood; or is it more complicated than that? More to the point of this paper, what would a great philosopher like Immanuel Kant have thought of all this?

Even though the *Critique of Pure Reason* was written over two hundred years ago—before there even was a theory of evolution—it is astounding how relevant the insights it contains remain to our current situation. The debate on origins is strongly reminiscent of the antinomy of pure reason from the Transcendental Dialectic. According to Kant in his introduction to this section of the *Critique* (A405-8/B432-5), the antinomy (which he considers to be analogous to the hypothetical syllogism) is an inference directed to a transcendental concept, namely the unconditioned unity of the series of objective conditions for any given appearance. Beginning as an attempt to

formulate a purely rational cosmology, it inevitably falls into a contradiction in the laws (hence antinomy) of pure reason. While both sides of this contradiction possesses a “dazzling but false plausibility,” they are ultimately ideas “that cannot be made to agree with appearances” (B435).

In Kant’s epistemology, transcendental concepts such as the one above can only arise from the understanding. Reason, on the other hand, is incapable of generating any concept at all—it “can at most only free a concept of the understanding from the unavoidable limitations of a possible experience, and thus seek to extend it beyond the boundaries of the empirical” (A409). In the context of cosmology this entails giving “absolute completeness” to an empirical synthesis by progressing from the conditioned toward the unconditioned on the principle that “If the conditioned is given, then the whole sum of conditions, and hence the absolutely unconditioned, is also given.” Therefore, the transcendental ideas are actually categories (in which the synthesis constitutes a series) that are “extended to the unconditioned” (B436).

On the basis of these categories, Kant breaks the antinomy of pure reason down into four conflicts of the transcendental ideas. These he then analyzes according to a “skeptical method” (not to be mistaken for skepticism) which seeks to “discover the point of misunderstanding in disputes that are honestly intended and conducted with intelligence by both sides” (A424/B452). The fourth conflict of these, over the “absolute completeness of the dependence of the existence of the alterable in appearance,” is the most applicable to the topic at hand (B443). The thesis given for this conflict states that “To the world there belongs something that, either as a part of it or as its cause, is an absolutely necessary being” (A452/B480). It is based on the cosmological argument,

“which ascends from the conditioned in appearance to the unconditioned in concept by viewing that latter as the necessary condition for the absolute totality of the series” (A456/B484). The antithesis, on the other hand, denies that any such being exists. As given by Kant, its proof shares the same ground as that of the thesis, i.e., the supposition of a necessary being.

Although the proof which Kant presents for the thesis is the cosmological one, it nevertheless bears a strong resemblance to the logic behind intelligent design, especially in regard to the latter’s most distinctive and central element—the inference of a designing intelligence. The flaw which Kant detects in this proof is that it combines an empirical regression with an analysis of a pure category. On the basis of alterations in the world empirical contingency is inferred, which leads to an ascending series of empirical conditions. However, we are unable to find within this series a first beginning or highest member. In order to complete the regression to its intended end, it is necessary to abandon empirical contingency in favor of the pure category, “which then occasioned a merely intelligible series, whose completeness rests on the existence of an absolutely necessary cause” (A458/B486). It is this inference from the empirical to the transcendental, even though it “is entirely suited to common human reason,” which Kant objects to (A461/B489). He concludes that “Alteration proves only empirical contingency...in accordance with the law of causality. [A] cause, even if it is assumed to be absolutely necessary, must yet be of such a kind as to be encountered in time and belong to the series of appearances” (A460/B488). Since the proof which he presents for the antithesis (which corresponds to Neo-Darwinism) uses the same ground as that of the thesis, his criticism of the logic of both is ultimately the same.

In these conflicts Kant equates the antithesis with empiricism and the thesis with what he calls dogmatism. His goal in examining these two conflicting sides is not to take a side, but to stake out a common ground in which “reason would begin a rule of lasting tranquility over understanding and sense” (A465/B493). Kant believes that both of these perspectives can contribute something valuable. Dogmatism, with its practical interest, provides a firm foundation for morality and religious faith. Empiricism, on the other hand, can provide “a maxim for moderating our claims, for being modest in our assertions, and at the same time for the greatest possible extension of our understanding through the teacher really prescribed for us, namely experience” (A470/B498). However, Kant thought that either of these viewpoints could become dogmatic if it were guilty of the “mistake of immodesty.” But when these two perspectives are joined in a synthesis, “intellectual presuppositions and faith on behalf of our practical concern would not be taken from us; only one could not put them forward with the title and pomp of science and rational insight, because real speculative knowledge can encounter no object anywhere except that of experience” (A470-1/B498-9).

This, however, does not mean that Kant thought that we should give up on cosmological ideas altogether. Rather, we should pursue them according to his doctrine of transcendental idealism. Transcendent ideas (which include the cosmological ones) are separate from experience; their “objective reality rests not on the completion of the empirical series but on pure concepts *a priori*” (A565/B593). Such ideas have merely intelligible objects about which one ultimately knows nothing. Despite this ambiguity, Kant thought that the cosmological idea which occasioned the fourth antinomy, “presses us to venture so far as to take this step,” because “the existence of appearances, not

grounded in the least within itself but always conditioned, demands that we look around us for something different from all appearances, hence for an intelligible object, with which this contingency should stop” (A566/B594). This compels us to investigate the idea of an absolutely necessary being.

In Kant’s analysis this becomes the transcendental ideal, also referred to as the ideal of pure reason. He describes it as an *ens realissimum* (“most real being”), the “concept of one thing thoroughly determined through itself, and cognized as the representation of an individual” (A575/B604). This highest reality provides the ground for the concept of the sum total of all reality (containing all possible predicates) which, in turn, is necessary for us to cognize any object.⁸ However, Kant does not presuppose the actual existence of a being conforming to the transcendental ideal, only the *idea* of such a being in order to provide a ground for our cognition. It is by hypostatizing this idea that one arrives at the concept of the highest reality as a being which is eternal, omnipotent, omniscient, etc.—i.e., God.

In one of the most famous portions of the *Critique*, Kant refutes the three traditional proofs for the existence of such a God from speculative reason: the ontological, cosmological, and the physico-theological (which is synonymous with the teleological proof/argument from design). While he viewed the first two with contempt, Kant had great respect for the physico-theological proof, which he called “the oldest, clearest and the most appropriate to common human reason” (A623/B651). However, like the other proofs, he thought that it was not valid to prove the existence of God. It could “at most establish a highest architect of the world, who would always be limited by

⁸ Such cognition is based on the method of thoroughgoing determination. It is only by limiting the concept of the All of reality through the process of negation that the complete determination of an object (other than the transcendental ideal itself) is possible.

the suitability of the material on which he works, but not a creator of the world” (A627/B655).⁹ In order to move from such an architect to the Creator (i.e., God), it is necessary to turn to the cosmological argument which infers from contingency an absolutely necessary being (see above). This proof, in turn, is shown to rest on the ontological argument that the concept of an absolutely necessary being proves the existence of such a being *a priori*. Kant considered this final proof to be specious on the basis that existence is not a real predicate. Given these difficulties, he concludes that “physico-theology cannot give any determinate concept of the supreme cause of the world” (A628/B656).

Ultimately, although Kant debunks any purely rational proof for the existence of God, it is not his intent to prove that belief in God itself is irrational. Quite the opposite, he believes that it is our reason which must be grounded in the belief in some supreme being, at least in the form of the transcendental ideal. Given that such a being is totally beyond the realm of our experience, however, we are unable to know anything about it conclusively. This includes whether it even exists, a question which Kant considered to have “no significance at all” (A696/B724). Nevertheless, he believed that not only it is permissible for us to assume “a unique wise and all-powerful world author;” it is necessary for us to presuppose such a being (A697/B725). As Kant further explains it,

in relation to the systematic and purposive order of the world’s structure, which we must presuppose when we study nature, we have thought this being, which is unknown to us, in accordance with the analogy with an intelligence (an empirical concept); i.e., in regard to the ends and the perfection on which those ends are grounded, we have given it just those properties that could contain the ground for such a systematic unity in accordance with the conditions of our reason (A698/B726).

⁹ Kant appears to harbor lingering skepticism about the basis for this claim of a highest architect, suggesting that it “perhaps might not stand up to the sharpest transcendental critique” (A626/B654). However, he does not attempt any such critique within the *CPR*.

Therefore, we may indeed “regard purpose-like orderings as intentional by deriving them from the divine will,” but only in such a way that “where you do perceive purposive unity, it must not matter at all whether you say, ‘God has wisely willed it so’ or ‘Nature has wisely so ordered it’” (A699/B727).

In conclusion, the philosophy of Immanuel Kant is quite pertinent to the current dispute over the origins of life on earth. Kant actually predicted that such conflicts, driven by our desire to extend reason beyond its bounds, would be present in the future in his conclusion to the Transcendental Dialectic; for this reason he thought “it was advisable to draw up an exhaustive dossier, as it were, of these proceedings and store it in the archives of human reason, so as to prevent future errors of a similar kind” (B732).

Although it is necessary to remember that Kant’s ideas predate Darwin’s theory of natural selection, it is not at all clear whether an awareness of it would have substantially impacted Kant’s thinking in this area.¹⁰ While he probably would have conceded that Darwinian evolution can explain the variety of life on earth, it seems unlikely that he would think that it alone could account for its origins. Such a conclusion is based upon a regressive synthesis which cannot be completed within the bounds of our experience¹¹ and can be extended only by appealing to naturalism, i.e., the idea that the material world is all that exists. As we have seen above, Kant considers this line of reasoning to be specious.

On the other hand, Kant’s thinking seems compatible with the basic premise behind the theory of intelligent design. As he explicitly stated, he did not consider it

¹⁰ I do not here presume to know what Kant actually would have thought had he known of Darwin’s theory. I am attempting only to apply his philosophy from the *CPR* to a contemporary subject.

¹¹ In our experience life is only brought about by other life. Life coming from non-life is therefore beyond the realm of our experience. While it could theoretically be within the realm of possible experience, some evidentiary basis would be necessary to justify such a possibility.

wrong to think that the world is the product of a supreme intelligence. His only objection would be to asserting that we can actually know anything about this “world author.”

While intelligent design can offer a theory to account for the order and complexity of the cosmos, one cannot provide any direct proof for it. This naturally poses a substantial problem for those who wish to establish a viable system of scientific inquiry based on such a theory. The criteria of design theorists, such as irreducible or specified complexity, boil down to judgments of plausibility based on a calculation of probability. Such judgments would appear to lack a solid empirical footing distinct from an analogy with human artifacts. While the theory of intelligent design might be useful in limiting the metaphysical pretensions of evolutionary biologists and dogmatic atheists, it remains to be seen what kind of scientific benefit it might possibly confer.

As for the controversy over teaching intelligent design in public schools, it seems that Kant would argue that students should be taught to think for themselves about this (or any) subject. They should learn what it is that we can know, as well as what it is that we cannot. If classroom instruction were to include speculation about biological origins, there are simply no defensible grounds for excluding a coherent, viable perspective from the discussion. While there are certainly difficulties with the specifics of the current theory of intelligent design (as there are with Neo-Darwinism, although perhaps not to the same extent), there is nothing improper about positing the existence of design in the cosmos. Kant found such an idea perfectly rational, although not demonstrable. He would likely have thought the same of the Neo-Darwinian hypothesis.

The key to solving such a dispute is humility in drawing conclusions from either hypothesis. There would be no danger in teaching intelligent design (the general theory,

if not the specifics) in addition to Neo-Darwinian evolution as long as both theories are put in their proper epistemological context, i.e., what we can know and how we can know it (and, conversely, what we cannot know and why). The principal objection to teaching the concept of design in biology in public schools, at least according to contemporary American jurisprudence, is that it violates the First Amendment's Establishment Clause since it is part of an attempt to advance a particular religion.¹² However, Kant has shown us that believing that there is design in nature does not have to be synonymous with theism. An additional inference (which cannot be justified by pure reason) is necessary to establish that any intelligent designer is, in actuality, God. Likewise an additional, unsupported inference is necessary to conclude from the theory of natural selection that there is no God (or designing intelligence).

¹² See the cases of *Edwards vs. Aguillard* and, more recently, *Kitzmiller vs. Dover Area School District*.

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