

**QUAESTIO DISPUTATA**  
**EVOLUTION, RANDOMNESS, AND DIVINE PURPOSE:**  
**A REPLY TO CARDINAL SCHÖNBORN**

PATRICK H. BYRNE

*Responding to a recent article by Cardinal Christoph Schönborn, the author argues that evolution of the world and life, through random processes rightly understood, is indeed consistent with divine, transcendent meaning, value, and purpose of creation. After criticizing traditional “intelligent design” arguments, the article analyzes the key notions of design and randomness. It then draws on the work of Bernard Lonergan to show how it is possible to reconcile the affirmations of divine purpose and the randomness of the evolving world.*

CARDINAL CHRISTOPH SCHÖNBORN OF VIENNA recently published an op-ed article in the *New York Times* entitled “Finding Design in Nature” (July 7, 2005). In that article he called into question the compatibility of neo-Darwinian theory of evolution with the Catholic teaching that the created order is endowed with purpose by God its creator. There have been a great many responses to this article.<sup>1</sup> For the most part these responses defended the compatibility of evolution and Catholic faith. In addition, these responses challenged the cardinal’s characterization of an endorsement of evolution by Pope John Paul II as “vague and unimpor-

PATRICK H. BYRNE earned his Ph.D. in philosophy from the State University of New York at Stony Brook and is currently professor and chair of the Department of Philosophy at Boston College. His areas of special competence include the philosophy of science, the thought of Bernard Lonergan, science and religion, and ethics. Among his recent publications are *The Dialogue between Science and Religion*, ed. (2005); “Inner Peace, Outer Peace: Peace, Feelings, and Personal Relations,” *Divyadaan: Journal of Philosophy and Education* (2005); and “The Goodness of Being in *Insight*,” *American Catholic Philosophical Quarterly* (forthcoming 2006). Two book-length manuscripts are in progress: “The Passionateness of Being: Explorations in Lonergan’s Metaphysics” and “The Ethics of Discernment: Choosing the Story of Our Life.”

<sup>1</sup> In addition to numerous letters to the editor in the *New York Times*, see especially the letter of Francisco Ayala et al. to Pope Benedict XVI, July 12, 2005, <http://genesis1.phys.cwru.edu/~krauss/papallettxt.htm> (accessed March 4, 2006); George Coyne, S.J., “God’s Chance Creation,” *Tablet* 259 (August 6, 2005) 6–7; Stephen Barr, “The Design of Evolution,” *First Things* 156 (October 2005) 9–12; Fiorenzo Facchini, “An Examination of Evolution and Creation,” *L’Osservatore Romano*, January 17, 2006 (Eng. ed., January 26, 2006, p. 10).

tant.”<sup>2</sup> While I fundamentally agree with most of these responses, I do not think that they have gone to the heart of the theological problem raised by the cardinal, namely, reconciling the randomness of evolutionary processes with the affirmation of divine design.

Central to Schönborn’s argument is his construal of the relationship between two concepts: design and randomness. To quote from the cardinal’s article: “Evolution in the sense of common ancestry might be true, but evolution in the neo-Darwinian sense—an unguided, unplanned process of random variation and natural selection—is not. Any system of thought that denies or seeks to explain away the overwhelming evidence for design in biology is ideology, not science.” Schönborn also states that the Catholic Church “proclaims that by the light of reason the human intellect can readily and clearly discern purpose and design in the natural world, including the world of living things.” Taken together these two quotations clearly imply that “evolution in the neo-Darwinian sense” is incompatible with Catholic faith.

Schönborn is raising a very important theological issue. Numerous writers and speakers have indeed exploited the successes of neo-Darwinian explanations as a basis for denying that the natural world has divinely authored value and purpose, a tenet so central to the truth of Catholic faith.<sup>3</sup> Quite rightly Schönborn was concerned to redress those excesses. Still, his criticism was leveled not merely at those excesses as such, but at the whole of neo-Darwinism without distinctions. This was too sweeping and undifferentiated a critique, since numerous scientists and nonscientists affirm both the legitimacy of neo-Darwinian methods of scientific explanation as well as transcendent divine purpose in creation. These conflicting claims call for clarification and qualification. To do so, it is necessary to look more closely at these two ideas: design and randomness.

#### CLARIFICATION OF THE MEANING OF “DESIGN”

Given the brevity of Cardinal Schönborn’s article, it is difficult to know what precisely he has in mind when he speaks of “design *in* biology” and “design *in* the natural world” (emphasis added). If he means no more than an intelligible pattern discovered and verified in empirical data, then such a meaning of design would be quite compatible with the common practice

<sup>2</sup> John Paul II’s use of the phrase “more than a hypothesis” can hardly be regarded as accidental, or “vague and unimportant” given its historical significance in the Galileo affair.

<sup>3</sup> For an excellent treatment of scientists who allege that evolution replaces belief in God, see Kenneth R. Miller, *Finding Darwin’s God: A Scientist’s Search for Common Ground between God and Evolution* (New York: HarperCollins, 1999) 165–91.

of scientific methods. Arguably, forming and empirically testing hypotheses about intelligible patterns in nature is what scientists do all the time. Galileo took pride in demonstrating that a projectile's motion is parabolic in form. Kepler showed that ellipses best fit the data on planetary orbits (although later Newton, Laplace, and others modified his result). Hans Krebs showed that the chemical processes that provide living organisms with energy form a complex cycle. Contemporary biologists analyze the complex patterns of exchange and interdependence within and among cells in organisms. Ecologists have discovered numerous intelligible patterns in the relationships of mutual dependency among organisms and their environments. If this were all that is meant by "design in the natural world," then certainly scientists in general, including most neo-Darwinian scientists, would agree that nature abounds with these sorts of intelligible patterns.

But the matter does not rest here, for common use of the word "design" almost always implies the necessary existence and agency of a designer. In other words, the connection between design and designer is assumed to be analytic: "There cannot be design without a designer."<sup>4</sup> "Designer" in this sense means a being with the intelligence to conjure up the intelligible pattern (the design), the materials and skills to actualize it, and the deliberate intention to accomplish some purpose. It is clear that Schönborn incorporates this additional assumption in his assertion that there is "overwhelming evidence for design in biology" and in his criticism of neo-Darwinism for regarding the natural order as an "unguided, unplanned process."

However, the existence of intelligible patterns does not necessarily indicate deliberate design. It takes special evidence, or special arguments, to establish that there is a designer behind any given patterns. If we see a person designing a building, that is evidence of a designer of that building. If we have seen many instances of people designing buildings, we have adequate evidence to infer that other buildings were also designed, even if we have not seen their designers in action. Something similar is true in the scientific realm. Because there is ample evidence of scientists designing new pharmaceuticals, for example, scientists have no difficulty affirming the existence of such designers. But when it comes to the numerous intelligible patterns encountered in the natural world, there are no comparable observations to ground claims about the existence of an intelligent designer. Scientists therefore prefer to avoid using the word "design" in reference to nature.

<sup>4</sup> William Paley, *Natural Theology: Or, Evidences of the Existence and Attributes of the Deity Collected from the Appearances of Nature* (Houston: St. Thomas, 1972; orig. publ. 1802) 9.

This avoidance does not necessarily mean that there are no legitimate bases for affirming the existence of a transcendent designer of natural phenomena. There are other, nonscientific ways of arriving at positive judgments about the existence of a divine designer of natural phenomena. Indeed many scientists do affirm a divine designer of nature, although they do so on bases other than those of the empirical methods of the sciences. This means that something must be added over and above the clear and “overwhelming evidence” that Schönborn seems to regard as obvious and sufficient. Among the various ways of grounding such affirmations, philosophers and theologians have offered arguments in addition to the empirical evidence derived from nature. While Schönborn does not refer explicitly to any such design arguments, he may have had something of this sort in mind.<sup>5</sup> These “arguments from design” are often met with skepticism, merely on the grounds that they are not scientific arguments. Yet to reject out of hand every such argument amounts to the unwarranted assumption that the only legitimate form of knowledge is scientific knowledge. Still, many of the proposed arguments from design are indeed flawed, even in the eyes of those like myself who find legitimacy in some nonscientific forms of knowledge about the ultimate cause of the universe.<sup>6</sup>

The kind of argument used by proponents of intelligent design seeks to find signs not merely of design, but of design by intervention. One common argument runs like this: A particular natural phenomenon has a pattern that could not have been produced by any sequence of natural causes: therefore, a transcendent designer must have intervened in the ordinary course of events at some place and time to produce this pattern: therefore God exists. Although this type of argument has a long history, the most influential of such arguments were presented by English divine William Paley in 1802. He began with a famous analogy: If a watch were found lying in a field, one would appropriately infer that it was designed by a designer.<sup>7</sup> Each of its parts was designed for a purpose in the overall functioning of the watch, which itself has the purpose of aiding human beings in telling time. Likewise, the intricacies of biological organisms occurring in nature also point to a designer. Beginning with the structure of the eye, Paley explored the interconnections among parts of many organisms, arguing that these complexities and their fitness for their functions are evidences of a divine designer.

Paley’s arguments are no longer widely accepted, but more sophisticated versions have since appeared. A recent and sophisticated version has been

<sup>5</sup> See Cornelia Dean and Laurie Goodstein, “Leading Cardinal Redefines Church’s View on Evolution,” *New York Times*, July 9, 2005, A1.

<sup>6</sup> See last section of this article.

<sup>7</sup> Paley, *Natural Theology* 1–5.

set forth by Michael Behe, professor of biochemistry at Lehigh University. He describes in careful detail several complex biochemical pathways and structures that play crucial roles in organic functioning. One of his most impressive discussions concerns blood clotting:<sup>8</sup> more than 20 distinct and intricately related biochemical sequences are needed to initiate (and bring to a halt) this protective response to a wound. Behe argues that these sequences are “irreducibly complex,” such that the removal of even one of the chemical reactions terminates the entire sequence. For this reason, he argues, these irreducibly complex sequences must emerge entirely whole—all or nothing. This means, he continues, that the irreducibly complex sequences could not have evolved piece by piece through normal evolutionary processes of variation. Therefore they must have been produced by an intelligent designer. Behe deliberately refrains from calling this designer God, but, if his argument were valid, such a conclusion would immediately follow.

However, as Kenneth Miller, professor of biology at Brown University, has argued, Behe’s irreducibly complex cycles could have resulted through a series of modifications to less complex sequences.<sup>9</sup> Originally the less complex sequences could have had different biological functions that shifted to novel functions as a result of the successive modifications. Although neither Miller nor anyone else has stood watch for the thousands or millions of years that would be required to actually observe the entire series of such transformations, his proposals undermine the logic of Behe’s design argument. Behe’s argument depends on the claim that the cycle could not *possibly* have been produced by any random sequence of natural causes, so the intervention of a designer is needed to explain its existence. Miller and others have shown that at least there are such possibilities—and indeed possibilities supported by considerable empirical evidence—so the logic of Behe’s argument fails.

A different type of argument from design, however, one quite distinct from the type advanced by Paley, Behe, and others and not vulnerable to the same criticisms, can be advanced. But before considering this second type of argument, it is necessary to clarify the concept of randomness that is crucial to Schönborn’s argument.

#### CLARIFICATION OF THE NOTION OF RANDOMNESS

Randomness has been notoriously difficult to define. First and foremost, it is difficult to define because it is a negative concept. To assert random-

<sup>8</sup> Michael J. Behe, *Darwin’s Black Box: The Biochemical Challenge to Evolution* (New York: Free Press, 1996) 77–97.

<sup>9</sup> Miller, *Finding Darwin’s God* 130–64.

ness is to assert that something is *lacking*. Second, there is a misleading confusion in common speech about “a random event.” Properly speaking, randomness applies to a series of events, not merely to one single event. Randomness in the proper sense means that a whole series of events does not conform to some intelligible pattern or rule.<sup>10</sup> Hence, when one speaks of an individual event as “random,” one really intends to single out that event from the series in which it occurs, and observe that it does not conform to the pattern or rule manifest in some or even all other events in that series.

This definition (i.e., that a series of events is random if it does not conform to some intelligible pattern or rule) brings to light the fact that randomness is a relational concept. Relative to some sort of pattern (say, the curve on a graph), the actual events deviate from it. For example, Hubble’s law in astrophysics is a simple straight line that relates the distance of a galaxy to its velocity of recession away from the earth. But actual measurements of distances and velocities of galaxies scatter around that straight line.<sup>11</sup> Those data points could conceivably conform to some other intelligible pattern. If, for example, they oscillated around a straight line in a sinusoidal fashion, they would be random relative to the straight line, but not relative to a more complex pattern that includes sine waves. It is, however, fairly easy to show that the actual data on galactic recession do not conform to this somewhat more complicated pattern.<sup>12</sup> But as Karl Popper has argued, it is impossible to establish by empirical means alone that a given series of events is absolutely random and conforms to no conceivable intelligible pattern.<sup>13</sup> The most that can be established is that the data are random relative to some specifiable (albeit extremely complex) kinds of patterns. To claim that some series of events is absolutely random goes beyond scientific verifiability. It turns a relative into an absolute without scientific warrant.

<sup>10</sup> See Gregory J. Chaitin, “Randomness in Arithmetic,” *Scientific American*, 259.1 (July 1988) 80–85; and Bernard Lonergan, *Insight: A Study of Human Understanding*, Collected Works of Bernard Lonergan 3, ed. Frederick E. Crowe and Robert M. Doran (Toronto: University of Toronto, 1992) 74.

<sup>11</sup> Hubble’s Law is expressed in the simple equation,  $V = H_0 D$ , where  $V$  is the velocity of recession of a galaxy,  $H_0$  is Hubble’s constant, and  $D$  is the distance to the galaxy. For a graph of the law with the scattering of observed data points see [http://astrosun2.astro.cornell.edu/academics/courses//astro201/hubbles\\_law.htm](http://astrosun2.astro.cornell.edu/academics/courses//astro201/hubbles_law.htm) (accessed March 4, 2006).

<sup>12</sup> That is, a “law” of the form  $V = H_0 D + H_s \sin(D)$ , with a suitably chosen value for  $H_s$ , might provide a closer approximation; yet the data points would still be random relative even to this more complex intelligible pattern.

<sup>13</sup> Karl Raimund Popper, *The Logic of Scientific Discovery* (New York: Harper & Row, 1959) 189–205.

### EVOLUTION AS RANDOM

The kind of randomness that is relevant to neo-Darwinian theories of evolution has to do with the emergence of biologically advantageous characteristics and their immediate environment. A central tenet of neo-Darwinism is that the biological opportunities of an environment do not directly cause inheritance of advantageous characteristics. That is, the origination of inheritable genetic variations is random relative to their adaptive advantage in the immediate environment.<sup>14</sup> If a relatively random series of mutations turns out to have adaptive advantage in the environment, then it will shift survival rates of its possessors and their progeny. But this series of mutations is a kind of happy accident; it does not arise because of any direct, intelligible pattern that connects advantage with the immediate environment.

Specifically, Darwinian explanations have long denied that an organism can pass along to its progeny a characteristic acquired by its own activity in response to the demands of its environment. More generally, neo-Darwinian explanations deny any “emanation” from environmental niches that somehow directly affects the genetic material of an organism, which will thereby improve its offspring’s adaptations to the niches. Numerous studies have been conducted to find such direct correlations with immediate environments, but without success.

Technically speaking, then, the randomness required by neo-Darwinian explanations is specific and relatively limited. But to claim that genetic variations are absolutely random relative to every possible intelligibility is neither needed by neo-Darwinian science nor could it be verified on purely empirical grounds. The more limited, relative randomness essential to neo-Darwinian science is not, as such, incompatible with God as transcendent and purposeful creator.

Scientists commonly hold that there is an even more sweeping sense of randomness than that required by neo-Darwinism which plays a constitutive role in the natural world. Yet, even this more sweeping sense of randomness is not absolute randomness—that is, it is not a denial of every sort of intelligibility whatsoever. To bring this more sweeping randomness into focus, consider the entire set of all the events that led up to the totality of all of today’s organisms. This totality includes: all the sequences of genetic mutations that ever occurred; all the events that led to each of these mutations—radiation events, chemical toxins, pH imbalances, chromosomal breakages and crossovers, and gene transpositions, etc., as well as all their occasioning events; all the anatomical and physiological variations that

<sup>14</sup> This, of course, does *not* mean that their differential *survival* is unrelated to environmental advantage.

resulted from the genetic mutations in the organisms that actually reached maturity; all the premature deaths of other organisms containing these mutations; all the events that brought organisms together at particular places and times resulting in successful mating and reproduction; and all the events that prevented successful reproduction and propagation of the genetic innovations and phylogenic variations, including the elimination of genetic strains through extinctions. This entire set of events (with all its complex myriad of intelligible strands, sequences, and interconnections) is the whole course of the evolution of the universe and nature as it has actually occurred. It is a radically contingent course of evolution, since, after all, many other courses of evolution are also possible and equally compatible with basic neo-Darwinian principles.<sup>15</sup>

The events in this vast array of physical, chemical, and biological transitions are connected by a series of applications of the laws of physics, chemistry, and biology. But from the point of view of those sciences alone, the entire sequence is random. That is to say, while each and every transition is completely explainable in terms of some subset of the laws of physics, chemistry, and biology, they are so only in terms of the prior conditions brought together at particular times and places. The laws of the sciences determine what would happen if those conditions were given, but they do not determine that those conditions must be given. It is as if the actual course of evolution were arbitrarily picked out of a grab bag of “all the possible sequences of events compatible with the laws of physics, chemistry, and biology.” Hence the entire set of events in the evolution of life is random relative to the laws of physics, chemistry, and biology.

This notion of randomness is indeed sweeping and may very well be true of the actual course of events in the natural universe. Although it is breathtakingly extensive, it is still not absolute randomness, as it only involves the denial that the actual course can be completely determined—conditions and all—by the laws of physics, chemistry, and biology alone. This conception of randomness does not imply the denial of every possible intelligible pattern, for such a denial is beyond the methods of the empirical sciences. All that can be said from the viewpoint of science is that the course of evolution can be and probably is random relative to the combined resources of the laws of the natural sciences.

### TRANSCENDENT PURPOSE AND GOD

To say that the actual course of evolution is random from the perspective of the combined natural sciences does not necessarily rule out the possibility that it may have an intelligibility, value, and purpose that transcends

<sup>15</sup> See Lonergan, *Insight* 677.

those sciences. In particular, the late philosopher and theologian Bernard Lonergan proposed exactly this possibility. He proposed a way of thinking about the compatibility of a divinely authored transcendent purpose and a radically contingent, randomly evolving universe that is comparable to neo-Darwinian understandings.<sup>16</sup>

Lonergan's approach begins by asking a different kind of question than that pursued by the traditional forms of the design argument. While the latter attempt to show that this or that intelligible pattern in the natural world can be explained only by postulating the intervention of a divine designer, Lonergan shifts the focus by asking whether the entirety of the evolving world itself has an explanation. This, I believe, is a more fruitful path toward a valid argument from design.

Any particular organism or pattern may very well be explainable by virtue of a series of transmutations and propagations. Yet each and every series of transmutations that explains this or that design is but a component of the whole of the course of evolution. To ask about the entirety of this course of evolution itself is to ask questions very different in kind from questions about the origins of this or that pattern. These further questions are not about how this or that complex pattern evolved from a predecessor, or even how it is related to a series of predecessors. Rather, questions about the whole of evolution are questions such as: Why does the natural, living world evolve at all? Why is it not static, with every living being present and perfectly adapted from the start, as was assumed for so many centuries before Darwin? Why does it actually evolve in the ways that it does? Why does it evolve according to neo-Darwinian rather than Lamarckian mechanisms? Such questions do not ask for an explanation of this or that pattern or organism within the evolutionary history of the world; they ask for an explanation of the contingency of the actual evolutionary history of the world itself.

As I have argued above, these questions cannot be answered solely by the natural sciences. The methods of the sciences rightfully and legitimately answer the question, "*What* are the laws of science?" by appealing to empirical evidence. Neo-Darwinism enjoys widespread acceptance because of the diversity, breadth, and depth of empirical evidence that it makes intelligible.<sup>17</sup> There are other possible, conceivable intelligible explanations of nature; neo-Darwinian principles happen to be the ones that enjoy

<sup>16</sup> Lonergan calls his version of the randomly evolving universe "generalized emergent probability." This allows him to characterize the universe in a way that does not commit him to any specific neo-Darwinian version. Generalized emergent probability rests not on the still-in-process results of the sciences, but solely on the kinds of "resources of the human mind for anticipating" what will ultimately be the finally accepted scientific version. See *ibid.* 417, 511–12.

<sup>17</sup> To be precise, there are several versions of neo-Darwinian theories, some

the best empirical support. In this light, to ask *why* these and not some other principles govern the transformation and propagation of organisms is to ask why the evidence is the way it is. The actual course of evolution provided the data that formed the empirical basis for accepting the principles. If we ask why those are the facts, why evolution occurred in this way rather than some other, we cannot appeal to neo-Darwinian principles as the explanation. Neo-Darwinism would then become an *a priori* dogma, explaining the existence of data upon which it itself depends for empirical justification. Ultimately, even to ask why the principles of evolution are the way they are comes down to again asking about the whole, contingent pattern of evolution itself.

Lonergan, by contrast, proposes that such questions will have answers if one conceives of God as the “unrestricted act of understanding,” that is, as the act that “understands everything about everything.”<sup>18</sup> Such a conception of God is not derived from scientific methods. Neither is it a direct intuition of God. A human being would have to understand everything about everything in order to directly understand what it is to be an unrestricted act of understanding. Since humans do not have complete knowledge, it is only possible to conceive of unrestricted understanding by extrapolation. Hence Lonergan’s approach is based on analogous understanding, an “imperfect understanding.” As he puts it, “Our grasp is not an unrestricted act of understanding but a restricted understanding that extrapolates from itself to an unrestricted act.”<sup>19</sup>

The analogy that Lonergan develops is based on his own discovery of the importance of insight and inquiry in human knowledge. The human act of understanding (insight) forms the basis for this imperfect, analogical understanding of the unrestricted act of understanding. That analogy is:

*particular question : particular insight ::  
the human unrestricted desire to know : X*

In this analogy, X is determined by its analogical relationship to the other three terms. As Lonergan argues, human insights are no mere matters of placing experiences under concepts. Much more fundamentally, human insights always come as answers to prior questions. Insights “relieve the tension of inquiry.”<sup>20</sup> Hence, there is a dynamic relationship between a question and its answering insight. Yet, each human question is always

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more substantiated by the vast range of empirical evidence than others. All face difficulties. Probably the precise, correct principles are not yet at hand. However, the general framework of neo-Darwinian approaches is widely accepted because it provides an intelligible unification of so many different fields of empirical data.

<sup>18</sup> Lonergan, *Insight* 666.

<sup>19</sup> *Ibid.* 693.

<sup>20</sup> *Ibid.* 28.

particular in some measure. Our questions arise in limited, particular circumstances and seek finite insights. Still, at the heart of Lonergan's philosophy is his contention that each particular, restricted, finite question arises from a more fundamental, unrestricted desire to understand, and indeed from a desire to understand correctly. According to Lonergan, this unrestricted desire to know is intrinsic to the consciousness of every human being: Everyone desires to know everything about every thing. While there are limits to what any human being can actually know, there is no limit to what human beings can ask about. Based on the analogy, therefore, to conceive of X is to conceive of what would have the same relationship to the human unrestricted desire to know, as a finite insight has to its occasioning particular question. Just as a particular insight would satisfy a particular question, so also X would be what is sought by the unrestricted, restless longing of the human mind and heart. This X, so defined, is what Lonergan called "the unrestricted act of understanding."

In itself, this analogy is only the basis of a conceptual possibility. As such, it is comparable to a possibility conceived of by a theoretical scientist. But, in proposing this analogy, Lonergan has not yet addressed the question of whether or not there is such an X (i.e., an unrestricted act of understanding). This further question he addresses later.<sup>21</sup> Meanwhile he explores the implications of this analogical conception, at the end of which he proposes that all the things that could be said about this unrestricted act of understanding are attributes that traditional theists would ascribe to God. Among other things, everything and every detail is included within its understanding. In addition, Lonergan also argues that this unrestricted act of understanding is unique, all good, all loving, and would be both self-explanatory and explanatory of every merely contingent fact.<sup>22</sup>

Of particular relevance to this article, Lonergan argues at length that God, conceived of as an unrestricted act of understanding, would be the author of a transcendent purpose for a contingent, dynamic, randomly evolving natural world that in its crucial aspects is comparable to the world of neo-Darwinian scientific theories. As he puts it, an unrestricted understanding would intimately understand the actual, evolving world in all its myriad of details, despite its unique random pattern of intricate twists, turns, transmutations, and dead ends.<sup>23</sup> "So it is that every tendency and force, every movement and change, every desire and striving is designed to bring about the order of the universe in the manner in which in fact they contribute to it."<sup>24</sup> In other words, God brings about each particular pattern and organism by bringing about the entirety of evolution, in which each particular pattern is a component. Only an unrestricted act of under-

<sup>21</sup> Ibid. 692–99.

<sup>23</sup> Ibid. 673.

<sup>22</sup> Ibid. 668, 678, 681–84.

<sup>24</sup> Ibid. 688.

standing could do what no human mind can do—understand the entire universe and thereby intimately understand each and every one of the myriad details and connections in the actual course of evolution.<sup>25</sup> Because of its unrestrictedness, it would also understand every other evolutionary course that could have been picked out of the grab bag of “all the possible sequences of events compatible with the laws of physics, chemistry, and biology.” Too, an unrestricted act of understanding would understand how to actualize the design of the course of the evolving world that is actually being realized.

Most importantly, however, an unrestricted act of understanding would understand why this design is being realized. That is to say, it would know the transcendent value and purpose that would make it worthwhile to realize this design of sequences out of all others that could have been selected. Because of its unrestricted understanding of that value, then, God’s creative choice would not be arbitrary or absolutely random. What would be properly regarded as random, as far as the methods of the natural science are concerned, would be comprehended as special, important, transcendentally valuable, and worth realizing by the unrestricted act of understanding.

As Lonergan puts it, God’s unrestricted understanding “is the ground of value, and it is the ultimate cause of causes for it overcomes contingency at its deepest level.”<sup>26</sup> In other words, God brings about each particular design and organism as a part in something larger: the entirety of the actual, contingent course of evolution. God brings about each particular design and organism as a contribution to the realization of the whole of evolution. Because God comprehends the value of the evolving world, each design within that world derives its ultimate purpose from its contribution to the realization of that transcendent value. Those are indeed components in God’s purpose, but the ultimate purpose is shrouded in the mystery of the unrestricted understanding and valuing that God is. Ultimately, then, the full purpose of any particular design is something that only an unrestricted act of understanding, and not any merely human mind, can comprehend.

Lonergan shows, therefore, how it is possible to reconcile the affirmation of divine purpose with an evolving world shot through with scientific randomness and contingency. The ultimate design, meaning, purpose of the evolving world is a transcendent meaning and value. To comprehend that

<sup>25</sup> “If there are no mere matters of fact that remain ultimately unexplained, then no conditions are fulfilled simply at random; all are fulfilled in accord with some exemplar [design]; so there must be an exemplary cause that can ground the intelligibility of the pattern in which are or would be fulfilled all conditions that are or would be fulfilled” (ibid. 679).

<sup>26</sup> Ibid. 679–80, where Lonergan also observes: “If that actual order lies within being and so is not mere matter of fact, then the order must be a value and its selection due to rational choice” of that value.

value and purpose would require an unrestricted act of understanding. For all human understandings, since they fall short of that attainment, the design or purpose of creation will remain the “mystery of mysteries,” Darwin’s claim notwithstanding.<sup>27</sup> Other approaches to the question of divine design and purpose pale by comparison.

Although Lonergan’s approach is most fruitful, what I have presented thus far is only a hypothesis about divine design and purpose. Lonergan does proceed to argue from the contingency of the evolving world as a whole to the existence of the unrestricted act of understanding. In doing so, however, he recognizes the need to introduce a further, absolutely crucial and indeed much more significant premise, namely: “Being is completely intelligible.”<sup>28</sup> This claim is at the heart of what he later came to call “intellectual conversion,”<sup>29</sup> and it may in fact be the most important claim in all of his philosophy. However, doing justice to this claim and to Lonergan’s form of arguing the existence of a designer of evolution involves greater detail than is possible in this note. For the present it will have to suffice to merely conclude that Lonergan provides a framework for reconciling the contingent, randomly evolving universe with a divinely authored transcendent design and purpose.

My concern here has been to keep open the possibilities for legitimate intellectual endeavors in the realms of both science and Christian faith. Science and reflection about God are complementary. Each profits by understanding and respecting its own methods and competencies as well as those of the other. Each side also profits when the other side calls it to task for excesses that ignore and transgress proper boundaries. Scientists follow the standards of scientific methodology and therefore have rightfully resisted the introduction of intelligent or divine design as strictly scientific hypotheses. In turn, Schönborn rightfully resists the claims of some scientists and others who have used the scientific randomness of evolution as the basis for going beyond the limits of their methods and denying all claims about transcendent reality, design, and purpose. Unfortunately the manner in which the cardinal advanced his criticism of their excess falls victim to an excess of its own, and thereby posed an unnecessary obstacle to fruitful exploration of the relationships between faith and natural science. I hope that my clarifications of the key ideas of design and randomness and raising the possibility of a distinctly different kind of argument from design will promote that fruitful exploration.

<sup>27</sup> See Darwin, *On the Origin of Species* (New York: Macmillan, 1962) 25, and *Voyage of the Beagle* (Garden City, N.Y.: Doubleday, 1962) 379.

<sup>28</sup> Lonergan, *Insight* 695.

<sup>29</sup> On being as completely intelligible, see *ibid.* 695; on intellectual conversion, see Bernard Lonergan, *Method in Theology* (New York: Herder & Herder, 1972) 238–39.