

## Intelligent Design & Education

Given the exalted status of science in our collective American consciousness, one might reasonably conclude that our centers of public education place a premium on curriculum designed to excite the nascent discovery impulse. How ironic then, that in the state of Massachusetts, the natural sciences are not listed among those courses of instruction under legislative mandate.<sup>1</sup> Nonetheless, the disciplines are enjoined upon students at various levels and inevitably the study of origins is undertaken. Darwinian evolution or some derivative thereof, continues to thrive as the irrefutable champion of academic pathways to the understanding of our beginning, and the vast implications for existence that necessarily proceed from it. The failure of Darwinian Theory, however, to specify a mechanism by which the observed diversity and complexity of species may be satisfactorily explained, has opened the door for alternative theories. Contemporary evidences from cosmology and biology argue forcefully for the presence of design and intelligent causation in the universe including our own terrestrial environment. In this paper, I shall bring forth some specifics relative to intelligent design theory, and interact with some commonly held objections and misperceptions, and the philosophical commitments that ground them. I mean to advocate for intelligent design deliberation in the classroom, to buttress the successes of microevolutionary theory and to nurture the desire for meaning and purpose that attends our daily existence.

In the reigning paradigm of Darwinism, science is that which hypothesizes and predicts within an entirely materialistic universe. The position admits of no reality outside of the closed system that is our universe and the material matter that constitutes it. All originates and progresses within this closed, self-sustaining system. This in brief, is the philosophy of metaphysical naturalism, and it has been defining the parameters of science since the enlightenment era. Any theory that intrudes upon its materialist premise is ruled out of order. Much in the extant "scientific" literature more fully explicates the tenets of the belief system, but nothing presently or forthcoming can affirm the veracity of the proposition. In other words, the conclusion is not the result of any empirical inquiry or data.

"It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus

of investigation and a set of concepts that produce material explanations, no matter how counter intuitive, no matter how mystifying to the uninitiated."<sup>2</sup>

Thus freed from the tyranny of strict physicalism, intelligent design (ID) theorists deploy the methods and tools of science to promote their view.

What is intelligent design theory? The universe evidences contingency, patterns and specified complexity (more on this below), which bespeak intelligent agent causation, intention, purpose and design. No special ability is needed to detect design. We infer it quite regularly. William Paley famously suggested that upon finding a watch in a field, one would regard the arrangement of materials and the time telling ability of the instrument to be the product of intelligence. The enormously popular television program CSI (Crime Scene Investigators) celebrates the wonders of forensic science to adduce agent involvement in a plethora of human death episodes. Evidence is analyzed to determine bullet trajectory, angle of knife entry, vehicle sabotage etc. to the end that the range of potential perpetrators may be narrowed to one. The "why" of the crime may remain unknown, but intention is decided. Identifying intelligence and causation is so frequent an occurrence for us that the practice is embedded in our tacit awareness, immediately applied to every day situations. William Dembski asks, "If design is so readily detectable outside science, and if its detectability is one of the key factors keeping scientists honest, why should design be barred from the content of science?"<sup>3</sup> SETI (Search for Extra Terrestrial Intelligence) utilizes the design inference by searching the cosmos for radio signals (partly funded by taxpayer dollars) differentiated from cosmic background noise by patterns. These patterns would indicate attempts to communicate by some intelligent being. "We humans can detect the presence of 'mind' and the intent to convey 'information' even in those instances when we are unable to decipher exactly what the information is or what that mind is trying to say. Human reason has an innate capacity for recognizing the presence of rationality."<sup>4</sup>

William Dembski articulates an "explanatory filter" or flowchart detailing the sequence of examination that settles on intelligent design: contingency, complexity and specification.<sup>5</sup> The "filter" is actually three filters in one. Each successive filter removes the impurities that otherwise result in poisoned explanations of observable phenomena. The first filter removes

that which demands *necessity* of the phenomena by establishing its *contingency*. The phenomena then pass to the complexity filter. If lacking in complexity, the phenomena remains trapped in chance considerations. If too complex for chance to explain, it passes to the specification filter. Here, patterns inferring randomness are filtered out and relegated to chance. If the phenomena manifest specified patterns consistent with intelligence, then design is inferred, all other explanations having been filtered out. Anticipating the retort that intelligent agency sometimes “mimics necessity and chance”, Dembski continues, “Intelligent agents can do things that unintelligent agents cannot and can make their actions evident...we take notice. False negatives do not invalidate complexity specification criteria.”<sup>6</sup> Perhaps no finer example of this can be offered than that with which we New Englander’s are well acquainted. In the Franconia Notch region of the White Mountains of New Hampshire, a rather stoic figure known as “old man in the mountain” once cast his solemn visage at fascinated tourists. Of course this was erosion, weathering induced random arrangement of jutting nooks and crannies that gave the illusion of a man’s face protruding from the rocky ledge. Not only so, but the same was “seen” from a very limited vantage point. No face appeared in stone from a frontal view, or from alternate angles. Contrast this with Mount Rushmore, and the distinction is self-evident. The hand of intelligent agents forged the unmistakable image of four former presidents in the stone of the mountain, discernable from any perspective. It is this precision that intelligent design theorists find in the universe and in the laws that regulate its functions and interdependence, from its astronomical to its microbiological entities.

### **Biology and Intelligent Design**

Oxford University Professor and evolution scientist Richard Dawkins describes Darwin’s theory of evolution with an eloquence that seems out of place in his materialist worldview:

“Darwin provided a simpler explanation. His way is gradual, incremental improvement starting from very simple beginnings and working up step by step to more complexity, more elegance, more adaptive perfection.”<sup>7</sup>

The main premise of Darwin’s theory is that variations and complexity result from nature’s randomly selecting from a range of genetic possibilities in a biological organism, thereby

conferring a survival advantage to that gene pool, which makes its way into its biological progeny. Millions and millions of years render the statistic probabilities and biologic possibilities credulous. The oft acclaimed “finch beak” and “peppered moth” examples of this process enjoy iconic status in popular dialogue. Yet these and other regular offerings are rather poor representatives of what the total theory demands. In neither case is a new species obtained. “They are small-scale adaptations that allow the organisms to survive under adverse conditions – in other words minor adjustments that allow them to *stay dogs or finches or fruit flies or whatever they already are.*”<sup>8</sup> The difference is best understood as *microevolution* (variations within the species) versus *macroevolution* (transition to an entirely new species), and truly Darwin’s contribution is meaningful in a number of applications. However, an unnecessary preoccupation with similar morphological features between species detracts from the more important discussion of biological differences, particularly at the microscopic level, a “Lilliputian world”<sup>9</sup> unknown to Charles Darwin.

Darwin identified the Achilles heel of his own theory. In his *Origin of Species* he wrote, “If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely breakdown.”<sup>10</sup> Molecular Biologist Michael Behe concurs and elucidates the same in his *irreducible complexity* model: “a single system that is composed of several interacting parts, where the removal of any one of the parts causes the system to cease functioning.”<sup>11</sup> He offers the mousetrap as an example of such a system. Each part of the mousetrap is necessary for the success of its function – catching mice. Remove one of the five parts of the trap and the mechanism fails to function. Indeed the system can no longer be called a mousetrap. It is obvious the trap could not have been formed by “numerous, successive, slight modifications”, and so meets Darwin’s criteria. Neither does it appear that Darwin was wrong in establishing the criteria. May we locate some such organism in the natural world though? Behe insists there are many, and elaborates the Cilium as a biochemical system that is irreducibly complex. He notes, “ciliary motion simply does not exist in the absence of microtubules, connectors, and motors”<sup>12</sup> – all of which are present in this microscopic biochemical system consisting of over two hundred kinds of protein parts. In fairness to Charles Darwin, he could not have

anticipated the complexity of the cell and any number of other unseen, previously undiscovered biological phenomena. But he sufficiently discerned the limits of his theory's application. It is worth mentioning here, that Behe might be accused of offering a sort of "god of the gaps" approach to biochemistry. That is, intelligent design in this instance is unnecessarily impressed into service because a natural explanation has not *yet* been discovered. The problem with this response is twofold. First, it avoids the argument by deferring to some supposed ulterior motive on the part of scientists like Behe rather than interacting with the data. Second it betrays the underlying philosophical prejudice of those detractors who have predetermined the universe to be a closed system in which the "cosmos is all there is and all there ever will be." Behe and others aver there are no gaps.

Another distinction is helpful in comprehending the failure of naturalistic evolutionary theory to account for speciation. In *Darwin's Black Box*, Michael Behe discusses the disparate utility of physical and conceptual precursors with respect to biological systems. Physical precursors are those previous physical properties that constitute an object, which properties slightly modified, improve the function of the object. Conceptual precursors are those previously existing physical properties, which serve as the impetus for radically different and more advanced mechanisms. So, one sees that a bike goes from point A to point B in time  $x$  by pedaling. By minimizing the weight of the bicycle and maximizing chain lubrication, perhaps adjusting the size of the sprockets (physical precursors), maximum efficiency of that mechanism may be realized. To wonder what would happen if a fuel-powered engine were attached to the bike to self propel the chain, is to contemplate an entirely new mechanism with added materials, the simple bike being the conceptual precursor to the motorcycle. The former may obtain in finch beak and peppered moth variation, but the latter is the fruit of design and intelligence. Proponents of macroevolution have heretofore failed to account for the plausibility of that process within the range of randomly selected, naturally assigned chance gene mutations and variations. Design theorists insist such an account will ultimately fail to surface, for the missing component in that expectation is the realization that information encoded in our genes cannot be accidentally, incrementally added. One does not proceed from simple one digit multiplication in mathematics, to advanced calculus without the addition of information.

Likewise, nature cannot input new data into existing organisms; it can merely act upon the potentialities inherent to that biological system amenable to external influence.

In his essay, *Word Games*, Stephen Meyer, Ph.D., argues that DNA sequencing is essentially textual in its setting. He writes,

“Amino acids alone do not make proteins, any more than letters alone make words, sentences, or poetry...In the case of human languages, the sequencing of letters and words is obviously performed by intelligent human agents. In the cell, the sequencing of amino acids is directed by the information – the set of biochemical instructions – encoded on the DNA molecule.”<sup>13</sup>

“Significantly, the nucleotide sequences in the coding regions of DNA have, by all accounts, a high information content - that is, they are both highly specified and complex, just like meaningful English sentences. ...Yet the information contained in an English sentence...does not derive from the chemistry of the ink...but from a source extrinsic to physics and chemistry altogether. ...The message transcends the properties of the medium.”<sup>14</sup>

The argument is recalcitrant to dismissal via Darwinian or even neo-Darwinian refutation. Imagine the lettered pieces of a billion scrabble games strewn across a plane sufficient to hold them in a fairly shallow pile, thereby subject to natural forces capable of altering their respective positions on that plane. Is it reasonable to postulate given the extreme statistical potentialities for variation, that the proper wind speeds, flying debris of other objects, rain, earthquake, etc., can arrange the scrabble letters into order as simple as “I swear to tell the truth”? Why then should the scientist or philosopher acquiesce to the imposition of a similar dynamic on the genetic code?

The inability of Charles Darwin to divine the complexities of the “Lilliputian world” unavailable to the technology of his day is understandable. Is the fossil record of the Gulliver sized organisms any more helpful to the theory? Darwin’s theory predicts numerous species of increasing complexity including families and phyla. In the wake of the progression, extinction would take place among those groupings that nature randomly consigns to the bone yard. It is therefore reasonable to predict an extensive variety of transitional species in the fossil record concordant with those extinction events. Darwin’s rejoinder that an imperfect fossil record precludes finding evidence of just those species that would confirm his thesis is simply ad hoc.

Fancy this: archeologists around the world unearth thousands of books. They are all bound in a manner true to the era of their respective origin. None of them include beginning and ending chapters, but the extant copies feature many contiguous chapters, unnumbered, in between the bindings. From those surviving texts, a recurring theme is found that presses for a very limited range of chapter one possibilities, and almost exhaustively eliminates others. The famous author Mr. Niwrad is called in to examine the texts, and insists that chapter one is such and such, in utter contradistinction to the prevailing hypothesis. The proof he asserts, is in the missing chapters, chapters that must fit in between those previously discovered ones and which make Mr. Niwrad's conception of chapter one more palatable in the eyes of his peers. Respecting the imprecise quality of analogies, this captures the content of Darwin's explanation.

The geologic period known as the Cambrian Explosion, so called for the sudden appearance of a number of biological body plans (530-540 million years ago), testifies against macroevolutionary gradualism. "Each phylum, is self bounded. ...At the very place where the scientific evidence of the fossil record should support the Darwinian prediction most clearly, namely at the origin of the highest category of animals, there the Darwinian theory breaks down completely."<sup>15</sup>

A protest against the implications of the Cambrian Explosion is the theory known as "punctuated equilibrium", wherein speciation takes place in "reproductively isolated", small populations over more rapid time periods. Thus, it is less likely that fossils will be found. Two rejoinders render the theory unlikely. First, it denies the widely accepted scientific tenets of observation, testability and falsifiability. What it does somewhat conveniently predict is that fossils *will not be found* to support the theory's major premise.<sup>16</sup> Second, the late evolutionist Stephen Jay Gould was content to establish the time period for punctuated equilibrium (PE) speciation to 50,000 years. However, standard genetic mutation rates will not allow for the kinds of change PE demands for the "morphological jumps" seen in the fossil record.<sup>17</sup> While it is fair to say that the Cambrian Explosion is not evidence of design, the genealogical phenomena it entails does make intellectual space for the design theorists' rebuttal that exclusively naturalistic theories lack explanatory force.

## **Cosmology and Intelligent Design**

What kind of planet is conducive to the appearance of multi-cellular, carbon based, oxygen breathing, intricately complex, inquisitive biological entities? Uniquely – earth! Big Bang cosmology is replete with profound empirical data<sup>18</sup> that concludes a singular event origin of the universe, and that supports the fantastic inference that humans occupy a terrestrial ball just the right size, in just the right place at just the right time for both habitability and discovery. Chance happenstance, or “an immensely powerful yet carefully planned and controlled release of matter, energy, space, and time within the strict confines of very carefully fine-tuned physical constants and laws that govern their behavior and interactions”<sup>19</sup>? A few representatives of an expansive collection are sufficient to challenge the former, and to pursue the latter.

The Cosmic Background Explorer (COBE) satellite measured the cosmic background radiation (heat) in the universe. The findings validated the suspicion of scientists that the universe had a very hot beginning, and a subsequent dispersal of heat throughout the expanding, cooling universe, much like a wood stove would radiate heat from its point of maximum temperature outward. The rate of entropy associated with the big bang made possible the formation of the elements necessary for life. “It can also be shown that if the specific entropy were any greater or any less, stars and planets would have never existed.”<sup>20</sup>

Perfect solar eclipses are rare for earthlings to observe. But they are impossible from any other “platform”; i.e. no other planet offers such a view. That is because the Sun is four hundred times farther away from us than the moon, and also four hundred times larger than moon. So the perfect or total eclipse is observable only on Earth. Furthermore, “Perfect solar eclipses are optimal for discovering the nature of the Sun’s atmosphere, testing general relativity, and timing of the Earth’s rotation.”<sup>21</sup>

It is necessary to remind that life cannot happen at any place at any given time in the universe. “Life can’t use just any type of light from any type of star. Our sun, it turns out, is near optimum for any plausible kind of chemical life”.<sup>22</sup> Our Sun is within the range of solar life expectancy for its type, and so is most observable and life supportive for its system’s terrestrial body capacities. If too old, “the stellar system would contain too many heavy elements”. If too recent, “the stellar system would not contain enough heavy elements”.<sup>23</sup>



snake eyes will result. Likewise, the nested chance probabilities of the many fine tuned properties of the universe are no more likely to happen in one over and against another. Also, we have zero evidence of any other universe. Regarding the universal forces, Richard Dawkins persists in his expectation that "Some unified theory will eventually show that they are as locked in as the circumference and diameter of a circle"<sup>27</sup>. Last, some still argue life on earth is the result of panspermia, i.e. other cosmic bodies seeded the Earth. The best response to that is yet another query; "There is little question that substantial quantities of viable organisms landed safely on the surface of Mars and Venus. So why didn't life take on these worlds?"<sup>28</sup>

### **Conclusion**

Human "being" is an enterprise in which purpose, design, and intention are regular fare. We set alarm clocks, plan gatherings, seek employment, establish personal goals and measure achievement. Humans make things, adjust things, and improve things. We do so in a manner that far exceeds necessity or struggle for survival. That kind of existence is entirely at odds with random, purposeless, and unintelligent processes. On what basis then should we concede a process that has no relation to being? This is counterintuitive. May we even trust that such a delivery system can biologically and intellectually equip us to test its reliability?

In this paper, serious challenges to Darwinian and neo-Darwinian evolutionary theory have been outlined, with some particulars. Irreducible complexity, the geologic fossil record, cosmological fine-tuning; each is an appeal to reconsider the dominance that contemporary evolution models have enjoyed in school curriculum. Metaphysical naturalists have succeeded in surreptitiously hijacking science and reassigning it from tool to story - a story that purports to explain everything, even that the yet unexplained will eventually be explained, without incident. But the facts presented here refute that inadequate story. Intelligent design theory and naturalistic theories may indeed coexist in our centers of learning, each serving as foil against which the other may measure its claims and power to explain the evidence. In the exchange we stimulate critical thinking, promote discernment and acquaint succeeding generations with methods of discovery that may culminate in new medicines, new technologies and new humility – nutrition with which we may hope to satisfy the insatiable human appetite for understanding and purpose.

## Notes

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- <sup>1</sup> Massachusetts General Laws. Chapter 71 Section 1 does not require primary training in the natural sciences.
- <sup>2</sup> Lewontin, Richard, "Billions and Billions of Demons"[Review of the book *The Demon Haunted World: Science as a Candle in the Dark* by Carl Sagan) NY Times Book Review, January 9, 1997
- <sup>3</sup> Dembski, William, *Intelligent Design* (Downer's Grove, Ill., InterVarsity, 1999), p. 126
- <sup>4</sup> Reardon, Patrick Henry, *The World as Text*, in Dembski, William, and Kushiner, James, *Signs of Intelligence*, (Grand Rapids, MI, Brazos Press, 2001), pp. 72-73.
- <sup>5</sup> Dembski, *Intelligent Design*, see pages 128-139 for detailed explanation and graphic.
- <sup>6</sup> Dembski, *Intelligent Design*, p. 141.
- <sup>7</sup> Van Beima, David, "God VS. Science", debate between Dr. Richard Dawkins and Dr. Francis Collins, Time Magazine (Nov.13, 2006) p. 52
- <sup>8</sup> Johnson, Phillip, *The Right Questions*, the foreword by Nancy Pearcey (Downers Grove, Ill. InterVarsity Press, 2002) p. 12
- <sup>9</sup> Biologist Michael Behe often uses this term - indeed cast the term in evolutionary dialogue.
- <sup>10</sup> As quoted in Behe, Michael, *Darwin's Breakdown*, in Dembski and Kushiner, *Signs of Intelligence*, p. 93
- <sup>11</sup> Ibid., 93
- <sup>12</sup> Ibid., 96
- <sup>13</sup> Meyer, Stephen C., *Word Games*, in Dembski and Kushiner, *Signs of Intelligence*, p. 107
- <sup>14</sup> Ibid., 113-114
- <sup>15</sup> Dehaan, Robert F. and Wiester, John L., *The Cambrian Explosion*, in Dembski and Kushiner, *Signs of Intelligence*, pp. 150-151
- <sup>16</sup> For a fuller explication, see, <http://www.ideacenter.org/contentmgr/showdetails.php/id/1232>
- <sup>17</sup> Ibid.
- <sup>18</sup> William Lane Craig (and others) expounds the philosophical argument for a beginning of time by pointing to the logical absurdity of arriving at the present moment by traversing an actual infinite number of past moments.
- <sup>19</sup> Ross, Hugh, *The Creator and the Cosmos*, (Colorado Springs, CO., NavPress, 1993) pp. 27-28.
- <sup>20</sup> Ibid., 36
- <sup>21</sup> Gonzalez, Guillermo, Richards, Jay, *The Privileged Planet*. (Washington, DC, Regency Publishing, 2004) p. 17.
- <sup>22</sup> Ibid., 68
- <sup>23</sup> Ross, p. 189
- <sup>24</sup> Gonzales and Richards, p. 206
- <sup>25</sup> Gonzales and Richards, chapter 8 The authors further explicate this in their discussion of "Galactic Habitable Zones".
- <sup>26</sup> Ross, 198
- <sup>27</sup> Van Beima, David, "God VS. Science", debate between Dr. Richard Dawkins and Dr. Francis Collins, Time Magazine (Nov.13, 2006) p. 53
- <sup>28</sup> Gonzales and Richards, p. 345