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On Creation Toward Scientific Explanation: A Directional Law

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Abstract

The various debates concerning man's origin have lingered on at least since Darwin's *On the Origin of the Species* was published in 1859. The crux of one such debate pits evolutionary theory against the theory of creation. Evolutionists have long argued evolution to be a more valid, logical, empirical, and scientifically credible explanation for man's origin. However, I argue that the very process of *creating* things, specifically whereby man's creations are designed to generate scientific data toward explanation and understanding, presents as a highly structured natural directional law—a law whose fundamental tenet is *the initiation of action by the creator (man) onto that which is created*, before the generation of data and subsequent explanation and/or understanding is possible.

Introduction

The longstanding argument between evolution theory (ET) and creation theory (CT) has been perpetuated for years. The lead objective of each perspective is the championing of the "creation of man" via its favored theories, data, and/or body of supportive scientific works. And though one might think a theory such as CT would shy away from debate on scientific methodology and empiricism (e.g., proof), the CT camp does not avoid such contention. Not only does CT look toward proof in support of its position, but it has been shown that the CT movement even surpasses ET at times with respect to addressing proof in support of its position (Barnes and Church, 2013).

However, be it ET or CT, the argument's historically intense focus on empirical support toward the same "end"—the origin of man—has clearly ignored the very means through which said empirical support is derived—man's participation in the act of "creation" itself. This paper puts forth the CT concept that the ubiquitous human act of *creating* things is of an unmistakable directional flow and that it is not what is created that best evidences CT but rather the patterned directional process of creation—a *creational paradigm* (CP)—that best evidences the active presence of CT within our world. Of particular importance is the application of the CP within scientific methodology whereby the objective is to generate data toward empirical support. Such application of the CP within scientific methodology manifests through the creation of "tools"—a fundamental component of science—a component where the demands of the CP are equivalent and inescapable for both ET and CT.

Tools and the Creational Paradigm

When it comes to the origin of man—be it via an ET- or CT-backed perspective, either side is intent on the goal of gener-

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ating explanation and understanding via measurement processes garnering data. Thus, scientifically speaking, the act of creation best interjects itself into the ET/CT argument in the form of man's creation of "tools"—tools of measurement such as physical instrumentation, tools of explanation such as theories, tools of insight such as knowledge, tools of calculation such as mathematical formulas, tools of communication such as language, tools of reference such as charts, maps, and drawings, and so on. It is the creation of tools that allows man to perceive himself as similar to God, and in doing so, he calls into existence those forms that have never before existed (Carus, 1893).

Such tools as *created* by those who use them (man) and said creation process and the application of these tools is always *directional* in nature—that is, the process of man creating a tool ultimately requires man (the creator) to act upon, apply, or use the tool in some manner, *a priori* to generating explanation and understanding via the data. And to do this is to operate within the framework of the CP. Thus, the CP is a fundamental requirement of scientific methodology, in that man is *required to create a priori* to any scientific explanation—by reason that mere explanation itself in its raw form must be created via application of knowledge as a tool.

The CP is most closely aligned with the causality concept known as "efficient-cause," as per the four causes from the *Posterior Analytics* by Aristotle in 350 BC (Falcon, 2014). According to Aristotle, it is this efficient-cause that specifies the creator's role in the production of the created, via manifest knowledge; and it is this knowledge and not the creator that is the most obvious candidate for specifying efficient-cause (Falcon, 2014). Aristotle exemplifies his doctrine of efficient-cause by referencing man's creation of objects—such as a statue. However, with respect to the CP and the creation of objects, Aristotle's example overlooks the layer of the CP— a layer *a priori* to creation of the statue that is comprised of man's *creation of tools* and man's *acting upon those tools* (e.g., a hammer and chisel). Falcon herself even endorses the knowledge of the four causes of Aristotle as "an indispensable tool for a successful investigation of the world around us" (Falcon, 2014, p. 1).

Examples abound with respect to the tools man utilizes to generate explanation and understanding of his world from data. Such tool examples fall into categories such as knowledge and theories, inanimate or animate objects, naturally occurring elements/organisms, or man-made elements and chemicals. However, one must point out that not all data obtained by man is generated by that which is man-made; biological organisms and/or naturally occurring elements can generate information of the surrounding world independent of the creative hand of man. It must be emphasized that although created independent of man's hand, naturally generated information is only understood and/or explained via application of tools man has indeed created—e.g., tools in the form of knowledge or knowledge assembled with predictive intent in the form of theories—and a lack of application of a tool on the part of man toward such phenomena, or any phenomena for that matter, yields nothing.

The Creational Paradigm: Knowledge and Theories

As the previous section introduced, knowledge itself is a tool—a tool that serves at times as an interactive liaison with other tools. The interpretation of information from tools such as the periodic table of the elements results from the application of knowledge as a tool to the periodic table as a tool. Thus, using knowledge as a tool to interact with and interpret another tool such as the periodic table is tantamount to a hammer driving a nail; both are tools whereby one acts upon the other via the applied action of man. Cook and Brown provide an elegant definition of knowledge as a tool:

> We hold that knowledge is a tool of knowing, that knowing is an aspect of our interaction with the social and physical world, and that the interplay of knowledge and knowing can generate new knowledge and new ways of knowing. (Cook and Brown, 1999, p. 381)

Similarly, few will doubt that theories are tools that man creates, and few will doubt the intimate connection of theories with knowledge. A simple search within an academic research database will yield hundreds of scientific papers and books making reference to both theories and knowledge as tools—both in title and in content (see Hacker, 2003; Woolnough, West, and Saunders, 2004). A theory that is not applied/utilized can never be validated to any degree. As a tool it must be put to the test against data so that it might be refined and honed, just as a knife edge is honed.

Despite ET and CT being theories with the same objective, they are fundamentally different in structure in that ET, via an inanimate *mechanism* of creation, does not follow the CP. In ET there is no creator entity, only an enduring systematic *process* of change (e.g., natural selection). And yet ET scientists (e.g., Darwin) themselves, as "creators," followed the CP to create ET and continue to follow the CP when applying ET as a tool. Thus, the issue of CP inconsistency with respect to man's creation of ET as a tool via the CP, and the non-CP process of evolution itself, places a great deal of drag on ET in its effort to diminish CT. CT has no such conflict with the CP. CT has always taken the position that:

1. Man has a creator entity (God) who created man.
2. God (the creator) acted upon that which He created (the bibli-

cal prophets) to generate "data" of Himself (the Bible).
3. Said "data" (the Bible) allows the created (man) to facilitate explanation and understanding of the Creator (God).

A man who creates a scale in his garage, steps on the scale, and thus allows the scale to calculate how much he weighs, has followed the CP in the same manner as 1–3 above; therefore:

1. A scale has a creator entity (man) who created the scale.
2. Man (the creator) acts upon that which he created (the scale) to generate data of himself (his weight).
3. Said data (the man's weight) allows the created (the scale) to facilitate explanation and understanding of the creator (man).

Examples of the CP in the surrounding world provide good insight into the CP and its ubiquitous presence. Such examples strongly indicate that our world, when explored by science, requires that science and all its investigative processes "unfold" in a specific, inherent way, with a creator (scientist) actively involved, when embarking on measurement toward the pursuit of scientific truth.

The Creational Paradigm: The Inanimate

The Paper Airplane

A paper airplane provides a simple mechanical example of the CP in action. In the most basic sense, one creates a paper airplane and then launches it so as to allow the airplane to recognize its intended utility—flight. The paper airplane will not launch itself without being acted upon by its creator. When laid on the floor, on a table, or other surface, the plane will not launch itself. Thus, when the objective is to create a paper airplane so as to generate explanation or understanding (via the data) about the airplane itself or its surroundings, one cannot avoid utilizing the CP in the process.

The Scale

The earlier-mentioned scale is perhaps the most basic example of tool/instrument creation and the CP in action. Although a seemingly obvious point, one must emphasize that a scale will never weigh anything on its own. Rather, its creator (man) must always step on it or place something on it before it will generate data toward directed explanation or understanding as per its intended utility. One cannot wait for a scale to act on its own to get work done. Its creator must intervene, and this action yielded by the creator in the direction of the created is inherently required.

The Thermometer

Man's creation of the digital, handheld thermometer provides a more modern example of the CP. As a tool created by man with the intent of generating explanation and understanding, the digital thermometer will not realize its intended utility in isolation. There is no digital thermometer that will, of its own volition, measure the temperature of a predetermined object. Man must intervene to achieve this result. Therefore, man, as creator of the digital thermometer, must act upon that which he created (e.g., pick it up, turn it on, insert batteries, use it) in order for the created to achieve its intended utility of generating data.

As an even more complex example, one can look at a mercury-filled thermometer. The mercury thermometer, being absent any electronics, is analog and therefore always functional no matter what environment it is in. This type of tool is continually generating data of its surrounding environment. Without electronics, there is no need to "activate" this tool, as it is continually activated. However, though there is no need for man to activate this type of tool in order for it to achieve its intended utility, for such a tool to generate scientific meaningfulness, it must be placed within an environment (*acted upon*) where an intended generation of explanation and understanding can be derived—and it will not do this of its own volition. The creator (man) must place said thermometer into the desired environment whereby it does its intended work.

Additionally, one can even trace back to the point at which man first "breathed life" into a mercury thermometer. This is the very point at which the mercury-filled tube was sealed and the thermometer began functioning on its own. Even if the process of sealing the tube is done mechanically or by automation, this mechanical process is the result of a man-made system having man's action initiated upon it, which subsequently applies that man-initiated action onto the tool, giving it "life." Again, one could easily trace such action back to the flick of a switch, setting of a timer, or plugging-in of a machine as the singular "life-activating" event for the tool.

Clearly, a mercury thermometer in isolation within a refrigerator can indeed unilaterally generate explanation and understanding of its own volition in an intended environment that is meaningful. In this scenario, again the question with respect to the CP is this: How does the thermometer get into the refrigerator in the first place? Or perhaps the thermometer is built into the refrigerator. The question with respect to the CP then becomes this: How does the refrigerator get plugged in so that the thermometer is activated? The answer to both of these questions is that activation of the tool cannot transpire outside of the CP, whereby initiating action on the part of the creator is a fundamental requirement.

Chemicals and Chemical Tools

Chemical tools, such as luminol, require the CP as well. Luminol is used by scientific crime-scene investigators due

to its light-producing chemical reaction that highlights traces of biological components found in blood when that blood is not visible to the naked eye (Harris, 2002). There is some point in the luminol manufacturing process when the chemical "comes to life"; that is, when the proper chemicals are mixed by man or man-controlled machine, or a specific chemical is added at some point to catalyze the chemical, thus giving it its ability to achieve its intended utility. Additionally, luminol as a chemical tool will not perform its intended utility of its own volition. It is a tool man must apply (using his tools of knowledge, as well as other physical tools, such as a spray bottle) within environments where it can generate data to foster explanation and understanding of those environments.

The *Creational Paradigm:* The Animate

Biological Organisms/Natural Elements and Processes

Phosphorescent algae exhibiting a characteristic known as *bioluminescence* (Wilson and Hastings, 1998) is an example of that which is created *outside* of the hand of man and is capable of its own volition in generating data to foster understanding and explanation of its surrounding world. However, similar to the paper airplane example, theories and knowledge generated by man (tools) must be applied before the generation of explanation and understanding from the data can occur. Such algae and the environmental conditions required for its occurrence have to be explained by man through his theories, tools, and measuring devices before explanation and understanding is generated. The algae may be able to unilaterally produce the effect, but again the effect is meaningless unless measured by man's tools and interpreted by theories and explanations he has created (tools) to derive meaningfulness from it.

Similarly, naturally occurring elements/processes can provide data independent of the intervention of man. For example, the visible presence of oxidation in some naturally occurring elements such as pyrite provides data indicating a specific natural process is taking place and can even provide data that bespeaks the magnitude, speed, or other characteristics of the process. In short, man often exploits such naturally occurring biological phenomena or naturally occurring processes so as to incorporate them into his tools—a process that would require the CP on a number of levels. Once again, for meaningfulness to be derived from such phenomena and processes, such naturally occurring data must be subject to, at minimum, interpretation via man's application of his tools of knowledge and theory.

Artificial Intelligence

An example that extends to more futuristic technology is that of the "intelligent device," such as a robot, cyborg, android, or computer. Albeit not truly animate as per human form, here man creates a device that has artificial intelligence to some degree that is designed to approximate the human condition on some level, such as learning independently and self-progressing intellectually. Such a device would be unable to escape the CP, as there must be some initial activating point whereby man sets the device into motion to "give it life"—such as insertion of batteries, activation of a power generator, software activation, or other primary activating event. Again, such activating events do not occur in isolation—man-the-creator must be the activating agent. Thus, man's creation of smart robots, android-humans, or other independent-learning technology of the future would not be able to circumvent the CP. This artificial intelligence example brings the argument for the CP to perhaps its most salient part: man as creator of man.

Human Procreation

Neither ET nor CT denies the existence of some creational mechanism/entity however. At the point where man attempts to generate his own explanation and understanding of his own creation, man himself becomes a "tool" within the CP—a tool-wielding product of that which has created him. It is at this point the CP and how it applies to said explanation and understanding via both the ET/CT ideologies becomes of great interest. Man's procreation is clearly the ultimate example of man's application of the CP. Man's ability to create man is the experiential essence of creation and an important catalyst of ET and CT. With respect to man's procreation and the CP, one can easily understand the "activating" role man himself plays on that which he procreates. Without man acting upon the infant man as he grows—e.g., educating the infant man, nurturing the infant man—the infant man can never grow and mature into one who himself creates, gains knowledge, derives theory, and generates data aimed at explanation and understanding of his surrounding world—including himself. Thus within the scope of the CP, man's procreation of man unfolds, as did God's original creation of man, as does man's creation of the inanimate scale.

1. Man has a creator entity (man) who creates man (the infant man).
2. Man (the creator) acts upon (educates, nurtures) that which he created (the infant man) to generate "data" of himself (knowledge within the infant man).
3. Said "data" (knowledge within the infant man) allows the created (the infant man) to facilitate explanation and understanding of his creator (man—his father).

Few would disagree with such a reasonable sequence of development seeing that infants in isolation and devoid of all human contact and care

do not survive. Infants who are denied certain developmental stimuli at certain ages never learn the range of necessary skills to function within society (see Fromki et al., 1974). Infants and children denied such opportunities do not develop on their own to learn to generate explanation and understanding of their surrounding world. They develop at a rudimentary pace at best, are retarded in normal skills and development, and become dependent on vigilant care.

The Creational Paradigm: Creation and Conservation

With respect to man creating things, it is important to detail the CP with not only the nature of human creation as a process, but also with the "scope" of this process in mind. When creating, there is always a creational act of "origin" where the original creative act and product transpire temporally. Said original creative act is followed by usage or application on the part of the creator (action)—such as when a map is made and then consulted thereafter and/or revised and maintained—but never created again as an originating act. Within theology such separation of the original creative act and the subsequent temporal, ongoing acting-upon, usage, or maintenance of the created is referred to as the "*creation/conservation*" doctrines, whereby there is an *originating* creation and a subsequent *continuing* process that acts upon the created (Craig, 1998). It is this continuing part of the CP, through application of knowledge and theories to that which the scientist creates (e.g., scientific instruments), that yields scientific progress.

It is also important to clarify the distinction between that which is *continuing* and that which is *continuous*—the former being intermittent and discrete, the latter being nondiscrete. Arguments exist for both camps of the creation/conservation doctrine with respect to God's creational involvement, one camp championing it as the traditional *extension* of the initial act of creation (continuous), and the other as God's acting upon entities that already exist (continuing) (Miller, 2009). When consciously assessing man's process of creating things (the CP) with top-of-the-mind awareness that "God created man in His own image," man as a creator of tools would expect to find that his fundamental creational process (the CP) in a world created by God, does indeed unfold consistently with that as documented of God. Such creational process—man following the CP—aligns more closely with Craig's (1998) "continuing creation" process, rather than a continuous process as endorsed by those such as Miller (2009). In demonstrating this alignment, Kvanvig (2007) provides a good analogy of Craig's (1998) continuing process by pointing out that a good watchmaker is unlikely to be continuously involved with that which he creates but only intermittently so. He must act to wind, to replace worn batteries, oil gears, or replace springs—all of which reflect intermittent continuing action on the part of the creator, rather than continuous action. That which man creates for a scientific purpose of data collection is no different. It is acted upon intermittently but not continuously—unless design intent requires such continuous action. Either way, said decision to act in either manner is always catalyzed via the application of tools—knowledge and theory—at the discretion of their creator.

Conclusion

In the end, all scientific tools with intent to generate explanation and understanding via data, as per the CP, require the creator (man) to "breathe life" into them, act upon them, apply them, initialize them, or prime them so that they may accomplish the utility they were designed for. The looming question is this: How would ET, as an enduring, long-term, nonentity, mechanistic creator of man, be able to initiate action upon that which it has created—man "the tool"—so as to allow the tool (man) to reciprocally generate data facilitating explanation and understanding of his creator (ET)? In short, if man must "act" upon that which he creates *before* that which he creates can generate data toward explanation/understanding of its surrounding world, then man himself—as something that has been created—must be acted upon before he himself can generate data toward explanation/understanding. CT falls back on concepts such as divine inspiration of the Bible as a divinely-given tool that acts upon man "the tool" to generate such explanation. ET has no such entity to provide such inspiration. Thus, one can readily see how the Bible—as a tool of knowledge created by God—inspires man to generate explanation of himself and where he came from. Understanding how ET as a *nonentity* acts upon man to allow such explanation and understanding of man's origin to occur is far more obscure at best, while simultaneously failing to follow the CP.

From the CT perspective, the CP is an earthly-manifested, parsimonious, fundamental, and directional progression whereby God's creational sequence unfolds for those whom He has created in His own image. As philosopher Xavier Zubiri states, "Gods creational paradigm—if you will—is just the order of reason" (Zubiri, 2009, p. 185). Both CT and ET as theoretical tools are held to the CP, an observable law, and they may not circumvent it. To argue against the CP is to argue contrary to scientific methodology and the systematic process by which it unfolds. To accept the CP is to acknowledge the CP as a fundamentally required *creationism* concept, *not* an evolutionary one.

Ultimately, of greatest interest is that ET proselytizers must use the CP to create, revise, and progress their theories, and they must use the CP to make and

apply their full-range of scientific tools. They use these tools, whose utility under ET is to validate ET, while at the same time attempting to demonstrate that God's creational paradigm, the very root paradigm of their own tool creation and use, is false!

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