

Commentaries/Commentaires/Comentários

A SCIENTIFIC PROOF OF THE EXISTENCE OF GOD*

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In his most recent article for the *Journal of Bahá'í Studies*, William S. Hatcher advances the argument that it is scientifically rational to suppose that God exists. The argument proceeds in three steps. First, the author reproduces in summary form the account of scientific method he had previously worked out in "The Science of Religion"¹ and *Logic and Logos*.² Second, he reformulates 'Abdu'l-Bahá's argument from evolution to establish the existence of a hidden "force." Finally, he equates this "force" with God. I wish to address each part of the argument in turn.

The author's fundamental thesis vis-à-vis the scientific method is that according to this method, "a proposition may be said to be scientifically proved when we have rendered that proposition considerably more *plausible* (meaning *probably true*) than all known, logically possible alternatives" (6). Furthermore, Hatcher adopts Popper's position that scientific theories are never absolutely verifiable, only falsifiable. It seems to me that Hatcher's cogent and lucid presentation of his arguments might be further clarified given a slight shift in terminology. The author claims, as he always has, that his perspective implies that scientific truth is relative (6). Two points bear making here. First, the force of what the author seems to be saying might be better captured by saying that scientific *knowledge* is relative. Second, it would seem that what he means by "relative" is what philosophers of science normally refer to as "fallible," following Pierce and the pragmatists' doctrine of fallibilism, which holds that human knowledge must always be held to be open to revision. When epistemologists normally use the word *relativity*, as when postmodernists such as Lyotard³ are charged with relativism, what is usually being said is that they are questioning the possibility for universally acceptable criteria for truth. They might hold, for example, that hypotheses may be judged relative to the criteria provided by a particular conceptual scheme or world-picture, but that there are no overarching criteria for judging between those conceptual schemes themselves. The author, however, does not seem to deny that universally acceptable criteria for truth are possible; rather, he is denying that the application of these criteria will produce absolutely certain knowledge. In other words, in this article, he does

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1. *Bahá'í Studies*, vol. 2 (Ottawa: Association for Bahá'í Studies, 1980).

2. *Logic and Logos: Essays on Science, Religion and Philosophy* (Oxford: George Ronald, 1990).

3. Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge*, trans. G. Bennington and B. Massumi (Minneapolis: University of Minnesota Press, 1984).

not seem to deny the possibility of foundational metanarratives for scientific truth, a possibility that seems to be presupposed by Hatcher's concept of "plausibility." Hence, I would suggest a shift to the language of fallibilism rather than relativity given the author's apparent commitments.⁴

The article's most intriguing discussion involves the second step of the argument, in which the author reformulates 'Abdu'l-Bahá's argument from evolution. Essentially, Hatcher appeals to the second law of thermodynamics, which holds that order is improbable, disorder probable. Order, in other words, requires explanation. He wants to argue that it is most plausible to assume that there is a hidden "force" which explains or accounts for the fact of evolution, rather than assuming, implausibly, that evolution, and most specifically the evolution of the human brain, has been the result of a "fortunate coincidence of two random phenomena," namely, natural selection and random mutations (13, n. 7).

Let us assume that step two of the argument has been successfully carried through and that the author has shown it is scientifically plausible to posit a force, akin to gravity, as providing the explanation for the evolutionary process—and the argument for that conclusion is the strongest part of the article. The third step of the argument involves the issue of whether we are warranted to equate that force with "God." Even granting step two, does step three of the author's argument succeed?

In the final section of the article, the author argues for equating the force, initially defined as that which produces evolution (13), with God. What is required to carry the argument through is to show that any force defined as "that which produces evolution" must necessarily also be the same entity that possesses all the divine attributes, i.e., saying "that which produces evolution," necessarily implies "God," where by "God" we mean everything we normally mean (i.e., the divine attributes).

His argument begins with the claim that it is reasonable to assume that "a force capable of producing an effect such as the human being is at least as subtle as humans" (14). And, he continues, reminiscent of 'Abdu'l-Bahá's discussion,⁵ this superior force must be God. Despite its brevity, the argument leading to that conclusion is complex, and we would do well to break it down into its component parts. Hatcher argues along the following lines:

- (1) There exists a force that is responsible for the creation of the human being through evolution.
- (2) This creator-force must be superior to its creation.

4. The relevance of this point becomes apparent if we consider, for example, how different Nader Saiedi's use of the expression "relativity of truth" is from that of Hatcher ("A Dialogue with Marxism," *Circle of Unity: Bahá'í Approaches to Current Social Issues*, ed. A. A. Lee, Los Angeles: Kalimát Press, 1984).

5. Cf. *Bahá'í World Faith*, rev. ed. (Wilmette, Ill.: Bahá'í Publishing Trust, 1956) 336–48 and *Some Answered Questions* (Wilmette, Ill.: Bahá'í Publishing Trust, 1981) 5–6.

- (3) Human beings possess free will and a conscious intellect.
- (4) Therefore, the creator-force that is responsible for the creation of human beings through evolution possesses free will and conscious intellect superior to human beings.
- (5) This creator-force (with its superior will and intellect) is God.
- (6) Therefore, there exists a God. (14–15)

Now, this argument is deeply problematic. Premise (1) was the conclusion of step two of the argument (which we have granted for the sake of argument). Premise (2) is problematic because of the ambiguity of the term “superior.” Premise (2) would be (analytically) true if by “x is superior to y,” we meant “x is capable of creating y.” On any other aspect of comparison, however, it is not clear why the creator need be superior to the creation; for example, in terms of, say, computational speed, there is no reason a priori why we need assume that a human being would be superior to the computer she has created. Or again, airplanes are vastly superior in flight than are their human creators. (Perhaps there is something special about creating consciousness or will; I will take this up below.) But the true (and limited) construal of (2) that I have given is too limited to lead to conclusion (4). All that could be concluded would be: (4') Therefore, the creator-force that is responsible for the creation of human beings through evolution is capable of producing free will and conscious intellect (and is in that sense superior to human beings). Perhaps we could try to salvage the argument by adding an additional premise:

- (1) There exists a force that is responsible for the creation of the human being through evolution.
- (2) This creator-force must be *capable of creating its creation*.
- (3) Human beings possess free will and a conscious intellect.
- (3a) *Free will and conscious intellect in particular are such that they can only be created by one possessing these faculties in superior form.*
- (4) Therefore, the creator-force that is responsible for the creation of human beings through evolution possesses free will and conscious intellect superior to human beings.
- (5) This creator-force (with its superior will and intellect) is God.
- (6) Therefore, there exists a God.

The revised argument is more subtle, but nonetheless problematic. We have granted (1), and (2) is analytically true. Let us for the moment grant (3a); i.e., let us assume, for the sake of argument, that the faculties of will and consciousness are such that they can only be created by a superior will/consciousness. Even so, granting (3) may make the argument circular. It is not clear that one can assert the existence of free will, for example, in human beings, or give any comprehensible account of what that assertion means, without the prior premise that God exists; and if it is not possible, then we

cannot prove the existence of God using a premise which already presupposes the conclusion (that God exists).

Now, even if we were to grant (3) and to waive the circularity of the argument, the argument suffers. In that case the argument to (4) would be valid, but the argument to (5) is not, unless by "God" all that we mean is any creator-force whose will/consciousness is superior to human beings. This gets the logical arrow backwards: it is true that "God" implies, by definition, a will/consciousness superior to human will/consciousness; but it is false that a will/consciousness superior to humans implies God. It might just point to smart aliens. The point is that God is not just any will/consciousness that is superior to humans; it is infinitely superior, and it is singular on the monotheist account. And if we apply Occam's razor, then having no reason to complicate the nature of the "force" the author's argument requires, means that we should not complicate it—how much less are we warranted to posit a God, with all the complexity which that entails. What, in any event, is the argument in support of the additional premise (3a) in the first place?

In conclusion, then, it seems to me that Hatcher's argument does not succeed in reaching the intended conclusion (6) that God exists, and certainly not if by God we intend to indicate all of God's names and attributes—the All-Merciful, the All-Powerful, the All-Knowing, and so on. At most (if we grant step two of his argument), he has shown that something exists that produces evolution. Though I shall not argue for the position here, I believe that the concept of God cannot play an epistemological role similar to that of other theoretical concepts (such as gravity) posited in scientific theory to aid explanation—"God-reliant" explanations involve a different sort of language game than "God-independent" explanations.⁶ I further believe that it may be impossible for philosophical analysis to reach the author's conclusion that God exists without reference to the particularity of a Manifestation of God and that Manifestation's concrete historical revelation.

ARASH ABIZADEH

6. For example, it is not that sometimes objects fall because of gravity, while sometimes they fall because it was God's Will; rather, it is that the force of gravity which "causes" the objects to fall is itself an "expression" of that Will (Bahá'u'lláh, *Tablets of Bahá'u'lláh Revealed after the Kitáb-i-Aqdas*, trans. H. Taherzadeh et al., comp. Research Dept. of the Universal House of Justice, rev. ed. [Wilmette, Ill: Bahá'í Publishing Trust, 1988] 142). To cite the divine Will as an explanation for events is not to engage in the same kind of explanatory activity as when we cite gravity, as Hatcher seems to assume.

AUTHOR'S RESPONSE TO COMMENTARY ON "A SCIENTIFIC PROOF OF THE EXISTENCE OF GOD"**Commentator:** Arash Abizadeh**Published:** *The Journal of Bahá'í Studies* 8.1 (1997): 69–72

Arash Abizadeh's commentary raises, either directly or implicitly, quite a number of points with regard to my article on a scientific proof of the existence of God. Responding to them adequately will require some careful attention to detail.

In the first instance, Abizadeh raises several questions concerning truth, knowledge, and relativity. He suggests that, in some contexts, it would be clearer (or more accurate) to speak of the relativity of knowledge rather than the relativity of truth. He also raises questions about exactly what I mean by relativity and how my notion of relativity compares with that of other (e.g., postmodernist) philosophers. Let us try to clarify these issues.

To begin with, it is important to realize that what is "true" or "false" are affirmations we humans make about reality, not reality itself, which (whatever it may ultimately be) just *is*. In our attempts to know how reality is, we formulate, in our own language, various statements which assert that some portion of reality is configured in a certain way. If reality (or the designated portion thereof) is indeed so configured, then the given assertion is true. If not, then the statement (which asserts that it is) is false.

Thus, the truth value (truth or falsity) of a given statement is relative to (depends upon) only two things: *structure* (how reality is configured) and *meaning* (what the statement asserts about how reality is configured). In particular, the truth value of a statement does not depend on our knowing what that truth value is. Truth is independent of our knowledge of the truth.

How do we go about the process of ascertaining the truth value of a statement? The answer is by engaging in certain verification procedures, which I have rather completely described elsewhere¹ and which I will not repeat here. The only relevant point here is that these verification procedures are relative (and not absolute) in the precise sense that we may apply all of these procedures to a false statement without detecting its falsity. In such a case we may conclude in error that the statement is true. We can only hope that, if we persist in applying our verification procedures to all statements, then, because of the logical interconnections between statements generally, we may sooner or later detect the falsity of the given statement and thus retroactively correct our judgment as to its truth value.

How do we deal with the fact that we may sincerely, rationally, but incorrectly assess the truth value of a statement? The only way is to remain open to that possibility. This means that we must always be aware of the logical possibility that future verifications may invalidate any given statement we

1. See, for example, *Logic and Logos: Essays on Science, Religion and Philosophy* (Oxford: George Ronald, 1990): 32–36.

currently hold to be true. But lest we hastily jump to the false conclusion that this represents a total chaos (which would be the kind of "absolute relativity" of many postmodernists), let us recall that there is an immense difference between a logical possibility and a high degree or probability. We can think of the knowledge-seeking enterprise as a dynamical system in which we continually reiterate our verification procedures and gradually converge towards a certain "fixed point," i.e., a stable description of reality so highly validated that the probability of its being falsified by future verifications is practically zero.

Now, when I speak of the relativity of truth, I refer precisely to the situation described in the previous two paragraphs. The truths that we hold, i.e., those statements whose truth value we have positively assessed, can never be considered absolutely immune from the logical possibility of future falsification and consequent retroactive revision. This does not mean that we believe any less in the truth of those statements we have verified. It just means that we wisely recognize the limitations God has put on our human capacity for truth verification. Thus, the truth we have, the truth we possess (in the form of currently validated or verified statements) is relative. Moreover, no matter how numerous and how highly validated may be the truths we have accumulated, there always remain(s) (an infinity of) true statements whose truth value we have not yet discovered.

One consequence of this situation is that the ongoing dynamic of truth-seeking is, in some ways, more important than the body of accumulated truths itself. A sincere skeptic may currently know very few truths but, by persisting in a careful and discriminating verification process, suddenly harvest an impressive array of new truths. At the same time, a credulous individual may currently possess many truths but be unable to make further advances in truth seeking for lack of a sufficiently discriminating personal truth-verification mechanism. (Also, a credulous person may believe many falsities along with the truths he or she knows, thereby diluting a drop of truth in a sea of falsity.) This is the way I understand the Bahá'í principle of the personal and independent search for truth: each individual is responsible for generating and deploying an adequate, discriminating truth-verification mechanism, and God has endowed every one of us with the capacity to do that.

Abizadeh suggests that what is properly relative here is not so much truth but our *knowledge* of the truth. I have no quarrel with this, and I have in fact used this very terminology elsewhere.² In any case, whenever I speak of the relativity of *truth*, I am generally referring to the truths we currently possess, not to the abstract set of all truths, many of the truth values of which we are ignorant.

However, it is important to realize that even the abstract set of all truths is relative in several important ways. To begin with, we have seen that truth depends not just on reality but also on the meanings of (what is asserted by) our

2. See, for example, "The Science of Religion," *Bahá'í Studies* 2:5.

statements about reality. Subtle shifts in these meanings (which, in the first place, are largely the product of various tacit conventions within the linguistic community) can alter the truth values of some statements without there being any change in reality itself.

Moreover, statements are semantically interconnected in such a way that the meaning of one statement may sometimes depend partly on the meaning of other statements: meaning depends on (is relative to) context. Thus, to consider the individual statement as an independent, meaning-bearing entity, is a slight (though deliberate and harmless) idealization of the real situation. (This, incidentally, has to be taken into account in our pursuit of knowledge: our verification procedures are often more properly applied to entire contexts, i.e., to theories [which are collections of statements] rather than just to individual statements.)

Another source of the relativity of truth lies in the fact that reality, being dynamic, may change so that a statement (or theory) that is now true becomes false in the future. (It is even possible that a statement we set out to verify may have been true in the beginning but false by the time we have succeeded in applying our verification procedures to it.)

In sum, both truth *and* knowledge are relative in various ways, and there are many different kinds of relativity. There is no genuine risk of confusion as long as we are clear, in each case, what we are talking about, but confusion can arise if we try to assimilate or reduce one kind of relativity to another. Nor does this "relativity of relativity" mean that everybody's doctrine of relativity is correct (i.e., true!).

With reference to the second part of his commentary, Abizadeh raises and discusses various issues regarding the portion of my argument that reasons from the evolutionary force to God. The problems Abizadeh perceives are largely due to the fact that his analysis does not take into account the crucial distinction between a logical definition on one hand, and a comprehensive definition on the other, with the result that his various formulations (or reformulations) simply do not apply to my argument as correctly formulated. Let us examine these questions in more detail.

A logical definition defines an entity by taking just one of the attributes of the entity, but an attribute that is sufficient to determine or distinguish the entity from all other entities. A comprehensive definition seeks to define the entity in the totality of its attributes. Thus, a logical definition of Ottawa would be that it is the capital city of Canada. Another logical definition would be that it is that city geographically situated at a certain latitude and longitude. Each of these definitions singles out Ottawa from all other entities in existence, yet neither defines Ottawa in all of its attributes. Moreover, the other attributes of Ottawa (e.g., its population or its class structure) are logically independent of the defining attribute: these other attributes cannot be deduced just from a knowledge of the (logically) defining attribute.

Many logical definitions of God are possible. For example, God is the uncaused cause, the universal cause, the ultimate origin of all existence, the creator of our particular universe, the creator of the human being, or the creator of human life on this planet (this last is the particular logical definition of God we have used in our scientific proof). Each of these definitions serves to determine or distinguish God from all other entities, but none of them defines God in the *totality* of His attributes.

Indeed, Bahá'u'lláh tells us that we humans will never be able to give a comprehensive definition of God, and 'Abdu'l-Bahá goes further by saying that humans cannot hope to give adequate comprehensive definitions of even the simplest of physical systems. As it turns out, comprehensive definitions appear to be possible only for certain abstract, logical entities such as those involved in pure mathematics.

Thus we recognize that God is beyond human comprehension and that God has an infinity of attributes. Yet any attribute of God that is true only of God can serve as a logical definition of God. We have therefore proved that God exists whenever we have proved the existence of an entity *G* that has any particular defining attribute of God. In the case of the present proof, we have proved the existence of a force-entity *F* that has created the human being on this planet. Since the attribute "creator of human life on this planet" applies only to God, if such a creator of human life exists, then $F = \text{God}$.

Once we have established the existence of God, the question of God's nature then arises. The last part of my article shows that *some* of the other attributes of God can be reasonably inferred from the attribute "creator of human life on this planet," but it is certainly neither true nor necessary, nor does my article claim, that all the divine attributes may be inferred logically from this one defining attribute. Yet, such an unreasonably strong condition is exactly what Abizadeh applies when he asserts that my argument is correct only if the defining attribute (which he states incorrectly) "necessarily implies . . . everything that we normally mean [by God] (i.e., the divine attributes)" (70).

In other words, it would seem that, in Abizadeh's view, one would have to establish all of the divine attributes, thereby giving a comprehensive definition of the *nature* of God, in order to prove God's *existence*. Since, as we have already seen above, a comprehensive definition of God is a priori impossible, such a viewpoint would exclude forever any possibility of proving God's existence by any means whatever. In fact, this same stringent criterion would, if applied in the natural sciences, exclude most accepted scientific definitions. That is why the distinction between logical and comprehensive definitions is so crucial to an understanding of these issues.

However, since Abizadeh specifically calls into question the logic of the portion of my proof that reasons from the evolutionary force to God, giving several incorrect reformulations of it, clarity would probably be served if I produce here a more formal, precise rendering.

To begin with, it is most important to understand that my argument does not seek to prove that God (according to some a priori notion or category) has intervened in the evolutionary process in a given way. Rather, my argument first establishes the objective existence of an evolutionary force, and Abizadeh states that "that conclusion is the strongest part of [Hatcher's] article" (70). My argument then proceeds by pointing out that humanity, being the end product or outcome of evolution, is thus the creation of that force. This *fact* justifies my regarding the evolutionary force (whatever it is and however it has acted) as God. It is *our* God, the God of humanity, because it is our creator: the evolutionary force *F* satisfies a logical definition of God.

My argument does not seek to predicate of God, so defined, attributes other than what can reasonably and plausibly be predicated of the evolutionary force on the basis of its being the cause of human existence. But, as it turns out, that is still quite a lot (which is one of the points of 'Abdu'l-Bahá's original argument). In particular, I argue that God has will and conscious intelligence.

However, these considerations about the nature of God *follow* the proof of God's existence, and they are not used in any way in the existence proof itself, contrary to some of Abizadeh's (incorrect) reformulations. Thus, Abizadeh is correct in affirming (in effect) that will and conscious intelligence are not defining attributes of God, but my article never claims otherwise. Rather, the article establishes that will and conscious intelligence are (some of the) attributes of the evolutionary force *F*, *after* it has already been established that the latter satisfies a defining attribute of God.

Here, then, is a correct formulation of the portion of the proof whose validity has been questioned by Abizadeh:

Definition. By "God" (i.e., the God of humanity) we shall mean whatever force or entity (*if such exists*) that is responsible for the existence of humanity (the human race) on this planet.

Commentary. Thus, according to this definition, "God exists" is logically equivalent to "There exists a force *x*, and *x* is responsible for the existence of humanity on this planet." (This is for the logical hardheads; we do not use existence as a predicate.)

Premise 1. There exists an evolutionary force, i.e., there is a(n) (unseen) force responsible for the process of evolution.

Justification for Premise 1. This is the conclusion established by the first part of my argument.

Premise 2. The existence of humanity on this planet is a consequence (result) of the process of evolution.

Justification for Premise 2. A highly validated observation statement (fact) of science.

Premise 3. Anything responsible for a process is also responsible for whatever results from the process.

Justification for Premise 3. Highly plausible logico-philosophical principle (essentially equivalent to the *potency principle* discussed in *Logic and Logos* 72).

Conclusion 1. The evolutionary force is responsible for the existence of humanity on this planet.

Justification for Conclusion 1. Follows by strict (classical) logical deduction from Premise 1, Premise 2, and Premise 3.

Conclusion 2. The evolutionary force is the God of humanity.

Justification for Conclusion 2. Follows by classical logical deduction from Conclusion 1 and our definition.

Conclusion 3. God exists.

Justification for Conclusion 3. Follows by classical logical deduction from Premise 1, Conclusion 2, and our definition.

This argument is incontestably logically valid. This means that anyone who rejects the conclusion must refute one of the premises or justify his or her rejection of our definition of God. In fact, clearly the only premise about which there can be much serious debate is Premise 1, and Abizadeh concedes (as have others) that my argument for Premise 1 is quite strong.

All of the above deals with what my argument establishes, but there are, of course, many things that it does not establish. To begin with, it does not establish the uniqueness of God. Other arguments are necessary to that end (see, for example, *Logic and Logos* 75). Nor does it establish that the evolutionary force has created everything that exists, i.e., that God is a (the) universal cause (see *Logic and Logos* 76). Nor does it provide any immediate, clear argument to the effect that God has created us out of love rather than as an idle display of divine power or (worse) in order to inflict gratuitous suffering upon us. (However, based on a few more plausible principles, a strong case can be made that the cohesion and complexity involved in the evolution of life forms constitute a physical expression of love, suggesting that our creator possesses love of a higher kind.)

None of this constitutes a defect in my proof, because the proof is based on only one phenomenon of reality, namely, biological evolution. It was not expected, nor as we have seen is it reasonable to expect, that we could infer all of the divine attributes from an analysis of this phenomenon alone. To establish other qualities and attributes of God, we need simply to examine other phenomena of reality such as human social evolution and the Manifestations of God (as Abizadeh notes and as I already mentioned in the last footnote in my article).

Even though social evolution and Progressive Revelation are objective phenomena entirely accessible to scientific method, the fact is that the methods of science have not yet been applied to these phenomena in a way that is universally recognized and accepted. I therefore chose, following 'Abdu'l-Bahá, to base my scientific proof on a phenomenon to which scientific method has been applied in a generally agreed-upon manner.

Thus, not only in the final portion dealing with the nature of God but also throughout, my proof uses the established scientific method of *plausible* reasoning. This method uses not only deductive but also inductive reasoning.

Pure deduction moves from general to particular, while induction moves from particular to general. The logic of plausibility is thus the product of a dialectic or dynamic consisting of both inductive and deductive moves: induction gives us plausible general principles, which then serve as hypotheses for chains of deductive reasoning. Now, whereas there exist precise, explicit rules of pure deduction, there exist no such rules for inductive logic (nor will such rules ever exist, for reasons that I explain in my article). Thus, the conclusions of a correct, pure deductive argument follow incontrovertibly from the hypotheses, but the conclusions of an inductive argument are not incontrovertible, only more or less probable.

The essence of scientific method is that it places a premium on accuracy (even sometimes at the expense of adequacy). Thus, in order to counterbalance the less than absolute certainty involved in its use of inductive reasoning, science deliberately operates on the minimalist principle of parsimony (Occam's razor) according to which abstract forces and entities (and their qualities) shall be hypothesized only when their existence seems unavoidable to explain a given observed phenomenon. The force of gravity is a perfect example of an abstract (unseen) force whose existence survives the test of the parsimony principle.

Thus, when I characterize my proof of God's existence as "scientific," I mean at least two things: First, that I use plausible reasoning throughout and, second, that the existence of the evolutionary force (and the qualities I attribute to it) pass the test of the parsimony principle. Science does not seek to establish all of the possible attributes of an unseen force or entity. It seeks rather to establish whatever minimal attributes are strictly necessary to explain the observable effects of the force or entity. The fact that the willing and conscious nature of the evolutionary force passes this test of minimality is therefore a strength of the *scientific*, evolution-based proof rather than a weakness, as might be inferred from the tone of some of Abizadeh's comments.

In this connection, Abizadeh's passing suggestion that "smart aliens" could constitute a plausible alternative to a hidden force as an explanation for evolution does not pass the parsimony test. In the light of the known facts of evolution, it is no more reasonable as an explanation for evolution than would be an appeal to aliens as an explanation for gravity.

Also, the comments in his footnote 6 and elsewhere show that Abizadeh has not correctly understood the analogical relationship my article makes between the evolutionary force and other known forces such as gravity. My article uses gravity as an *example* of an unseen force whose objective existence is scientifically established. The article does not state or imply that the evolutionary force is, in other respects, "akin to gravity" (70). Indeed, my article stresses rather the point that the evolutionary force is necessarily quite different from all other known forces (see page 13 of the original article).

Abizadeh worries about the comparative notion of "greatness" involved in one of my arguments concerning the nature of God. The notion is as follows: God is

plausibly greater than we in possessing any positive power (as opposed to a limitation) we have, but to a greater degree. This, He has already demonstrated to a remarkable degree by doing at least one thing we could never do, namely, producing us and the whole process of evolution that brought us into existence.

Abizadeh's examples of the airplane or the computer do not constitute counterexamples to this principle. The human being did not *create* the airplane. We only discovered a way of implementing some of the pre-existing laws of aerodynamics (which we did not and could not create) in such a way that heavier-than-air flight became technically feasible. Similarly, our ability to realize computer technology depends essentially on the fact that objective reality is configured in a certain way and obeys certain laws that we did not originate. But the way we humans are configured, and the laws our nature obeys (including the subtle, inner nature of our consciousness and subjectivity), depend wholly on the action of the evolutionary force that created us.

However, let us consider briefly Abizadeh's point that God is not just willing and conscious but infinitely willing and conscious. The following strong plausibility argument can be made in favor of this proposition:

The evolutionary force has created not only each individual human but also the whole of humanity. Thus, this one force should be plausibly greater than the whole of humanity and not just greater than any individual human. Now, we observe that such positive capacities as intelligence or will vary in human beings, without there being any apparent upper limit to the degree of these capacities. Even though the intelligence (say) of each individual human is finite and limited, the intelligence of humanity as a whole is not so limited: no matter how intelligent a human may be, it is possible for there to be another human even more intelligent. Since the degree of intelligence of the evolutionary force must be greater than that of all humans, it must be greater than every finite degree of intelligence and therefore of infinite degree.

For a more detailed and complete discussion of these and other methodological issues involved with proofs of the existence and nature of God, see my "Prologue on Proving God" in *The Law of Love Enshrined*, selected essays by John S. Hatcher and William S. Hatcher (Oxford: George Ronald, 1996). Indeed, a number of more detailed and complete arguments than those given in my article are possible, but they involve a thorough and systematic scientific discussion of such questions as the nature of human consciousness. I chose to avoid this in my article (just as I avoided detailed discussion of the neo-Darwinian theory of evolution) because I felt it would blur the otherwise clear and streamlined articulation of the argument as a whole. Perhaps, in the future and in another context, a detailed treatment of some of these issues will be useful.

A SCIENTIFIC PROOF OF THE EXISTENCE OF GOD**Author:** William S. Hatcher**Published:** *The Journal of Bahá'í Studies* 5.4 (1994): 1-16

I read with great interest the article by William S. Hatcher. The addition of a fifth unseen force of evolution (God) "different from all other [four] forces that science has so far discovered" (13) makes me ask again about the unity or oneness of creation. I wonder if gravity, the strong and weak nuclear forces, and the electromagnetic force are not themselves what the author calls "relative but temporary equilibrium states" (8) that, in the name of the oneness of God and the oneness of creation, could be considered modifications of the one force "in continual motion" (8). When the author argues that "according to our present knowledge, no other force [other than a quite different one] could have produced the phenomenon of evolution" (13), I wonder if the four forces in their temporary equilibrium have settled into a plateau and remained there not as fossils but as self-contained dynamisms. This leads me to ask if we should not distinguish between force and its various states of relative equilibrium and, with reference to the untapped and therefore still disordered operations of the human brain, recognize the necessity of those states of equilibrium for the radical, disequilibrating ascent of humankind beyond them. Does the order which equilibrium provides allow for the radical disorder that attends the recent emergence of the "end product" of evolution? Evolution might then be, in and as humankind, not a different force, but the one force in a more recent and far more complex state of disequilibrium, its continual motion having not yet resolved itself in humankind, because of the very nature of subjectivity, into something analogous to, though more complex than, the less complex equilibrium of the force of gravity. The author invites us to imagine a "chaos" before gravity when unsupported objects moved randomly in all directions rather than downward. Subjectivity can still appear similarly unsupported, moving randomly in all directions.

I think particularly of the modern rediscovery of the unconscious as a crucial factor in that subjectivity. Freud, for example, dealt almost entirely with such lawless psychic motion (which is how the unconscious appeared to manifest itself) in an effort to formulate a hypothesis that would impose an order or law upon it. Evolution, he was convinced, would not be raised to the full stature of its inherent order until the law governing the psyche (psychology) was discovered. Sexuality, Jung was persuaded, was not that law.

I myself wonder if the ultimate "mystical" state of that subjectivity—the true poverty and absolute nothingness described in Bahá'u'lláh's *The Seven Valleys and the Four Valleys*, which is in some sense the annihilation of subjectivity—may perhaps in those few persons who achieve it complete the work of God, the creation (force of evolution) itself settling into an ultimate equilibrium that is

the continual objective motion or the motion of the unmoved Prime Mover. Does this state in part describe the station of the Manifestation, the knowledge of which is identical with our knowledge of our true selves? Do we, in this state, know the God who is closer to us than our own life-vein? Dante describes such motion in the concluding cantos of his *Divine Comedy*.

My reservation about this article resides in the statement in the abstract that the phenomenon of evolution "represents a persistent movement from disorder towards order of the kind that strongly suggests the action of some unobservable force *different from all other forces [that science has] so far discovered*" (1; emphasis added). If God, as presented in this article's scientific proof, is an "unobservable force different from all other forces [that science has] so far discovered," is not the author suggesting that we have only recently discovered God in and as the force of evolution, which is "different from all other forces [that science has] so far discovered"? Is he not suggesting that we have only very recently discovered God? I would willingly acknowledge that the force of evolution, as the author explains it according to the logic of scientific truth, is a new revelation of God that radically changes our earlier nonevolutionary perception of the creation. On the basis of the author's "scientific proof," I would indeed identify this force with Bahá'u'lláh's "new creation," which has replaced our earlier conceptions ("Lo, the entire creation hath passed away!").¹ Indeed, I am made vividly aware of the central role of evolution in the Revelation of Bahá'u'lláh including, above all, Progressive Revelation.

My one quarrel, then, is with the author's phrase "different from." I would suggest that the force of evolution might be a radical modification of the one force (Shelley's "one Spirit's plastic stress") released from the equilibria the author describes to produce the "chaos" of a transition from one state of a dynamical system to another infinitely more complex state, which after some 50,000 years remains yet disordered. This article makes me aware of how recent this new state of disequilibrium actually is: 50,000 years is hardly long enough to establish the kind of equilibrium toward which evolution is moving at the human level. The process from one-celled animals took some 600 million years, and from algae perhaps 2 billion years. The Earth itself has existed for perhaps about 4.5 billion years. Therefore, 50,000 years strikes me as, relatively speaking, minutes ago. And, then, beyond time itself, there is God, "veiled in My immemorial being and the ancient eternity of My essence" knowing love for all that is eternally mentally present to God ("I knew My love for thee, therefore I created thee").² That this love is now consummating itself as the earth itself, the physical reality of humankind ("we will mean the physical human being and

1. Bahá'u'lláh, *Gleanings from the Writings of Bahá'u'lláh*, trans. Shoghi Effendi, 3d ed. (Wilmette, Ill.: Bahá'í Publishing Trust, 1976) 29.

2. Bahá'u'lláh, *The Hidden Words of Bahá'u'lláh* (Wilmette, Ill.: Bahá'í Publishing Trust, 1939) 4.

not the human being in any metaphorical, cultural, or spiritual sense" [Hatcher 12]) is, I suspect, the evolutionary work of the next 500,000 years, which is the length of the Bahá'í dispensation understood as the fulfillment as distinct from preparation. In short, I see the force of evolution producing in the brain as a physical organ the body's consciousness of itself, which is to say, creation's consciousness of itself as that consciousness exists from all eternity in the mind of God. Evolution achieves its highest state of equilibrium in the achievement of a consciousness of its own process, as the physical human being's consciousness of itself. Psyche and soma, mind and body, are one. The Cartesian split is healed, the split being merely the condition necessary to consciousness, though not consciousness itself.

Perhaps the greatest immediate value of the author's "scientific proof" for me is the removal of chance, which in its own way affirms what is the opposite of chance: providence. The radical disorder that currently confronts humanity on every side does indeed become "providence" rather than "calamity." I try, often in vain, to "Know this, O servant."³ According to the second law of thermodynamics as the author describes it, the "calamity" arises from a deluded effort to inhabit an isolated (or abrogated) system, such as a previous dispensation, or my own (or humanity's) infancy, childhood, or adolescence. Such systems, when viewed in isolation as fixed and final (arrested developments), will, as the author argues in a different context, necessarily "degenerate toward disorder" (10) unless energy from without (as in photosynthesis within the leaf subsystem of the plant) is absorbed. I associate that absorption of energy from without (Progressive Revelation) with maturity, the coming of age of myself and of the human race.

Though it is easy enough to view this coming of age psychologically as a growth from within grounded in biology (as the atheist Freud did in his sexual theory and the atheist Marx did in his notion of dialectical materialism), Hatcher's scientific argument persuades me that the force is indeed objective and without. The coming of age is the action of God. To view my own maturity in this way is to view it very differently indeed. It is the action of an ultimately unknowable force, which reveals itself in Bahá'u'lláh.

The author points out that photosynthesis uses direct sunlight as an outside energy source. Direct sunlight is the metaphor that both Bahá'u'lláh and 'Abdu'l-Bahá use to describe the energy of God progressively released like the sun's rays by the Manifestation. Scientific metaphors of this sort become the parables through which 'Abdu'l-Bahá tended to teach. If I compare 'Abdu'l-Bahá's teaching to that, say, of Christ, I note how Christ compared the Kingdom in his time to a little child and how 'Abdu'l-Bahá consistently compared it to the mature adult. In other words, he identified creation with

3. *Hidden Words* 4.

maturity, coming of age, while Christ tended to identify it with childhood. I would say that the degeneration of the Christian system lay in the persistence of this now outworn identification. Christianity became, with time, humanity arrested in childhood. The infant Christ at the breast of the mother became one of its major icons.

Clearly, the author follows in 'Abdu'l-Bahá's footsteps when Hatcher declares that he is presenting "a somewhat detailed reformulation of 'Abdu'l-Bahá's argument using certain contemporary scientific terms that were not current at the time 'Abdu'l-Bahá wrote" (1). I am sure some of Hatcher's readers will find the mature demands of his scientific logic a painful break with the now easier, less conscious demands of childhood and adolescence.

If the force of evolution did not operate objectively from without, we would remain bound to these earlier stages of our own human growth. The energy that Bahá'u'lláh released would, if bound to infancy, childhood, and adolescence, destroy humanity in its now arrested state, as indeed it has ("The time for the destruction of the world and its people hath arrived"⁴). To read and grasp this article is one way of escaping that destruction by embracing the coming of age which the author's argument demands. There are, of course, many other ways, those that relate directly to the heart being finally more essential because the heart is, as the *Hidden Words* declare, God's human home. Fully to reside there, as a part of its sanctification, the intelligence or rational soul must, however, be brought into play. This, I believe, Hatcher has in the spirit of 'Abdu'l-Bahá done superbly.

ROSS WOODMAN

4. Bahá'u'lláh, qtd. in Shoghi Effendi, *The Advent of Divine Justice*, 4th ed. (Wilmette, Ill.: Bahá'í Publishing Trust, 1984) 81.

AUTHOR'S RESPONSE TO COMMENTARY ON "A SCIENTIFIC PROOF OF THE EXISTENCE OF GOD"**Commentator:** Ross Woodman**Published:** *The Journal of Bahá'í Studies* 8.1 (1997): 81–84

I have read with interest the thoughtful comments of Ross Woodman in response to my article on the scientific proof of the existence of God. The scientific approach to truth deliberately articulates a minimalist description of reality. This is the price science pays for putting a premium on precision over adequacy, and when we are trying to heal diseases or fly airplanes, precision is the spiritually dominant norm. The scientific approach is also particularly useful in articulating truth to those with either an extremely skeptical or an extremely credulous turn of mind. But when trying to come to grips with the infinitely faceted human reality in its totality, then I really appreciate the opportunity of indulging in the maximalist approach of the artist, poet, seer, and philosopher.

Woodman is quite right that all forces are expressions of God (not manifestations, but emanations), even as 'Abdu'l-Bahá has said that, for example, the magnetic force of attraction is really a form of love. Similarly, gravity and the other known forces are also expressions of divine love at the lowest (material) level of reality. And they express God's love for humanity, because they order the physical world in such a way that makes it bearable (just think if we really did have to live in a gravity-less world and worry about objects flying in all directions while still attending to the major task of saving our souls).

Moreover, I would say that all these forms or expressions of the divine have always been present in our midst; the only thing that changes is our (degree of) *awareness* of them. Thus, Woodman's one stated reservation about my article (82) could perhaps be overcome by viewing my argument not so much as proving anything genuinely new, but rather as a somewhat novel articulation of the awareness of the divine presence in one of its forms. Indeed, everything that happens to us every day may be viewed as an expression of the divine in some way: life is a constant, ongoing dialogue with God, but most of us remain unaware of that fact. God is hidden from us by His very closeness not, as many imagine, by His remoteness.

So, what proves that God exists? *Everything*, literally everything that *is* proves that God exists, because God is the Essential Being (the origin of the *is*ness) of reality. But rather than seeing this for the miracle that it *is*, we take it all for granted and then ask for more proof. What is consciousness, in the last analysis, but a primary intuition of being itself? (For a more systematic and complete discussion of these points, see the collection of essays by John Hatcher and William Hatcher, *The Law of Love Enshrined*, Oxford: George Ronald, 1996.)

There is undoubtedly much truth in Woodman's assertion that many of the current forms of traditional religion represent arrested development and articulate an immature conception of true human potential. However, what is perhaps not so clear is the extent to which such arrested forms were unavoidable products of our history or just *accidents de parcours*. In any case, it is certainly

true that the Bahá'í Faith brings a more mature awareness of the *potential* of the self (what the Finnish Bahá'í educator Partow Izzadi calls "megaconsciousness"), rather than just awareness (consciousness) of the mere existence of the self.

I also agree that both Freud and Marx saw clearly that the psyche, on the one hand, and society, on the other hand, had to be understood for humanity to advance to a higher level of consciousness. But, as Woodman says, their approach was reductionist (and materialistic, of course) and therefore unable to meet their respective goals. The failure of both these worldviews will finally heighten the general awareness and appreciation of the adequacy of the Bahá'í viewpoint, which incorporates what is valid in the insights of Freud, particularly the whole important notion of unconscious motivation, and what is most positive in the values of Marx, namely, the social ideal of nonexploitative human relationships.

More generally, I conceive of created reality as an infinite-dimensional space: it takes an infinite number of parameters (conditions) to determine anything completely. Since God is the only infinite Being, God alone can (and does) control all of these parameters. However, as a concession to our finiteness, God establishes certain *local laws*. Gravity and the other physical forces are examples of these local laws. Thus, the real law of gravity is something like this: *if all of the infinite number of nonphysical parameters of created reality are held constant, then the four-dimensional projection of the law of gravity is the Einstein-Newton law*. Thus, in order to "suspend" or change the operation of the law of gravity as we perceive it, God does not have to intervene in physical reality in some arbitrary or miraculous way but only to change slightly the "settings" or conditions of one or more of the nonphysical parameters.

Consider the following analogy: *A* and *B* live on a plane (two-dimensional space). They live next to each other, but there is a line segment (fence) that separates them. For *A* to visit *B*, *A* must go to the end of the fence, around and back down the other side to *B*. This is a "law." There is (in two dimensions) no other way for *A* to get to *B*.

However, if *A* and *B* were aware of the third dimension, they would see that in reality they are almost infinitely close, and if they could have access to the third dimension, they could visit one another in a split second (by jumping over the fence). Thus, by bringing in the third dimension, a seemingly intractable law of two-dimensional reality is "violated" (actually the law remains valid in two dimensions, but anyone having access to the third dimension is no longer affected by the law in the same way).

This example illustrates how I understand the impact of spiritual forces on our lives. It shows how it is possible for our interactions with God and with the spiritual world (the spiritual dimensions of reality) to be dynamic, rational, and lawful all at the same time. In the future, it is intended to publish a much fuller articulation of this infinite-dimensional model.