

Quine on the Possibility of Religion-Based Science

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Received: 25-08-2018 / Accepted: 02-12-2018

There are various ways in which science can be classified as theistic or religion-based. One is when the components of scientific theories are accepted by the followers of religions and rejected by the opponents of religious beliefs. Although Quine (1908-2000) does not believe in any religion, the possibility of one concept of religious science can be inferred from his explanation of the foundations of science. According to him, science is based on empiricism and physicalism, but these two presuppositions are not demonstrated. Therefore, introducing supernatural elements into scientific theories is not impossible; that is, empiricism and physicalism in science can be put aside, and the production of religion-based science in the above-mentioned sense is possible. But according to Quine, this probable science should be able to predict the events in the empirical world and pass the test of experiment. There are some teachings in religious texts that have experimental implications. If these teachings can be used to gain more control over the empirical world, science will be committed to accept them and, according to Quine, must be supplemented by the supernatural implications of these teachings.

Keywords: religion-based science, physicalism, naturalism, empiricism.

Introduction

Science can be classified in various ways. One is to divide empirical science into religion-based and non-religion-based; more precisely,

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some thinkers have claimed the possibility of such a division. Of course, the opponents of such a division are not few. The division of science into religion-based and non-religion-based may be proposed in various ways. One is to say that a religion-based science is one in which the scientific theory is based on suppositions that are affirmed by the followers of religions and rejected by the opponents of religious beliefs. But is it possible to realize such a science?

This article studies the possibility of realizing such a science based on Quine's concept of science. Quine loved science and restricted himself to accepting scientific achievements. His advice to philosophers is that science has been so successful in human life that its weaknesses should be ignored. He has no devotion to religion, nor to religion-based science. But there are some points in his thought that can open the way for the production of religion-based science. In short, he maintains that sciences seek to dominate the world and the criterion for evaluating their theories is being able to pass the test of sensory prediction. And a theory that can provide more accurate prediction and empower us more to dominate the world deserves to be accepted and appreciated. In his view, any scientific theory that explains the world may use components within itself that cannot be seen in any laboratory. But if it helps us more than other competing theories in explaining the world around us, we will be committed to its non-experimental components.

At this point, the path to introducing supernatural/theistic elements into science is open. In this article, at first, we describe Quine's theory, though a critical evaluation of his ideas about the nature of science is not our aim. Then, we focus on the meaning of religion-based science, the foundations of science according to Quine, the possibility of introducing religious/supernatural phenomena into scientific theories according to Quine's understanding of science, and the extent to which religious/supernatural elements are actually found in scientific theories.

The Meaning of Religion-Based Science

There are many debates on how a science or discipline can be regarded as religious. The term “religion-based” can be applied to a science either based on its content of and, second, considering external matters.¹ The second itself can be divided in various ways—for example, according to whether the theorists of that science are religious, according to whether a theory is introduced in a religious country, or because religious sources recommend that type of science. It is clear that such definitions of religious science are not substantial, and religious teachings do not play an important role in them.

In terms of content, we can also propose a number of possibilities: (1) A science may be regarded as religious/religion-based if its theories are revealed by religious sources, just as it is possible that some scientific theories may be inspired to their theoreticians in a dream or a film. (2) A science or its theories can be called religious/religion-based if religion contributes to the evaluation and correction of its mistakes or affirms its validity.² (3) A science may be considered religious/religion-based if it is inferred from religious texts through a proper method. (4) A theory or science is religious if the subject of some experimental research in it is a religious teaching that can be examined empirically; for example, in the Quran and hadiths, there are some teachings that have empirical implications, such as the following verses: “Now surely by Allah’s remembrance are the hearts set at rest” (Quran 13:28), and

1. We have borrowed these meanings from the discussions on the meaning of religious philosophy (see Shokrollahi 2010).

2. For example, Avicenna, the great Muslim philosopher, developed an argument for the existence of God, which he called “the Argument of the Righteous” (Avicenna1993, 3:55). The argument is based on reflection on existence itself, not on existents. He believed that the following verse of the Quran referred to his argument: “Is it not sufficient as regards your Lord that He is a witness over all things?” (Quran 41:52). We have borrowed this meaning of religious/theistic science from ‘Ubudiyyat (2003).

“And if the people of the towns had believed and guarded (against evil), we would certainly have opened up for them blessings from the heavens and the earth” (Quran 7:96).¹ (5) If the criteria of evaluation in a science were religious texts/teachings, that science may be regarded as religious/religion-based. According to Quine (as will be explained more later), although this kind of science is not impossible, it’s realization is very unlikely; therefore, we will not examine this kind in this article. (6) Finally, a science or a scientific theory may be considered religious/religion-based if its criterion of evaluation is experiment but the theory or science is based on or implies things that are claimed by religion and denied in contemporary science (i.e., empiricism and physicalism)—for example, when a theory implies an interrelationship between natural and supernatural worlds, which is against physicalism, but religious sources affirm it.² In what follows, this meaning of religion-based science will be discussed in more details.

Quine on the Foundations of Science

Willard Van Orman Quine (1908-2000) was a central figure in philosophical debates for half a century or perhaps “the most influential American philosopher” of the second half of the twentieth century (Lacoste 1997, 92). Quine made remarkable contributions to various topics, including philosophy of science. Some authors place “Quine’s work in the context of … twentieth century scientific philosophy, a movement within the broader stream of twentieth century analytic philosophy” (Hylton 2005, 181).

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1. This meaning of theistic science is borrowed from Dinani’s concept of Islamic philosophy. He maintains that Islamic philosophy is a philosophy that reflects on religious teachings rationally (see Dinani 2005, 4-31).
 2. Javadi Amuli, an outstanding contemporary Muslim philosopher in Iran, holds that a philosophy can be considered Islamic/theistic if it affirms the supernatural claims mentioned in Islamic/theistic sacred texts (Javadi Amuli 2010). This meaning of theistic philosophy corresponds to the religious/religion-based science mentioned here.

By science, Quine means “the farthest flights of physics and cosmology, as well as experimental psychology, history, and the social sciences. Also mathematics, insofar at least as it is applied, for it is indispensable to natural science,” and excludes prior philosophy (Quine 2004b, 276).

Quine's view of the nature of science can be summed up in naturalism, by which he means commitment to the method and achievements of empirical science without seeking any knowledge outside it.

Naturalism

Quine is an empiricist and the successor to Locke, Berkeley, and Hume (Follesdall 2000, 193), but in some aspects he differs from his predecessors. One of these aspects is naturalism. He states, in his *Five Milestones of Empiricism*, that empiricism left behind five turning points in the last two centuries. He explains these milestones and counts naturalism as the fifth milestone (Quine 2004a, 301). Naturalism is present throughout Quine's writings, sometimes explicitly and sometimes implicitly. According to Gibson, “There is a key to unlocking a correct interpretation of Quine which many of his critics and commentators have overlooked. That key is Quine's commitment to naturalism” (Gibson 2000, 25). But what is the meaning of naturalism exactly, and what are his reasons for this commitment?

According to Quine, naturalism is “the recognition that it is within science itself, and not in some prior philosophy, that reality is to be identified and described”; it is the “abandonment of the goal of a first philosophy prior to natural science” (Quine 2004b, 275). Gibson describes Quine's naturalism as consisting of “the following two theses. First, that there is no first philosophy; second, that it is up to science (and, in particular to physics) to identify and describe what there is (i.e.,

what exists)" (Gibson 2000, 25), which means that ontology and epistemology is up to science (see Magee 2003, 297-8).

In other words, not only we ask empirical science to explain the relationships between the objects of the physical world but also it is only empirical science that tells us what kinds of beings exist and what things do not exist; therefore, we do not need first philosophy¹ or any other disciplines to learn about the existence or non-existence of anything. Thus, according to Quine, the only acceptable and reliable disciplines are the various branches of science.

Quine's Reason for Favoring Naturalism

Why is Quine so enthusiastic about empirical science? Pointing to the attempts of Carnap, Russell, and early Wittgenstein, he says, "Naturalism has two sources, both negative. One of them is despair of being able to define theoretical terms generally in terms of phenomena, even by contextual definition" (Quine 2004a, 305). According to Quine, those philosophers wanted to explain the whole structure of human knowledge in terms of sense-data, but they were not successful, because scientific theories sometimes imply elements that do not have any empirical content: "The other negative source of naturalism is unregenerate realism. The robust state of mind of the natural scientist who has never felt any qualms beyond the negotiable uncertainties internal to science" (Quine 2004a, 305).

Therefore, according to Quine, scientists are realists, but they are not certain about their achievements. Some kind of uncertainty always accompanies them. Although scientists know this uncertainty, they do not doubt their method and continue their increasingly successful procedure. So, Quine's advice is that we should follow scientists. Although its

1. In classical philosophy, including Islamic philosophy, it is first philosophy (metaphysics) that determines which things exist and which ones do not (See Tabataba'i 1984, 5).

achievements are tentative, uncertain, and fallible, science has brought us more useful knowledge than other disciplines such as philosophy.

In what follows, we will discuss three questions: (1) What is the nature of science? (2) How reliable is science? (3) Does absolute commitment to science, or naturalism, mean denying the supernatural?

The Essence of Science

We cannot describe Quine's explanation of the nature of science in one or two sentences. There are many components in his concept of science that should be considered for this purpose, including (1) his theory of "holism,"¹ (2) his description of "observation sentences" and its relation to scientific theories,² and (3) his criteria for the evaluation of theories.³ But it can be briefly said that the main elements of science, according to Quine, include observation and hypothetico-deductive method (Quine 1981, 27; 2004a, 305).

It should be noted that although Quine was a great proponent of science, he did not regard it infallible and certain: "It [i.e., naturalism]

1. The theory of holism was introduced by the French philosopher Duhem (1861-1916). Quine believed that the theory was well argued by Duhem (Quine 1961, 41). However, Duhem's holism was restricted to physics (Gillies 2001, 124), and Quine extended it. It could be said that Quine first introduced a strong holism but gradually he returned to a moderate holism. In his *Two Dogmas of Empiricism*, Quine wrote, "The dogma of reductionism survives in the supposition that each statement, taken in isolation from its fellows, can admit of confirmation or information at all. My countersuggestion, issuing essentially from Carnap's doctrine of the physical world in the *Aufbau*, is that our statements about the external world face the tribunal of sense experience not individually but only as a corporate body" (Quine 1963, 41; see also Quine 2001, 45).
2. Some of his important discussions on this subject can be found in his *Pursuit of Truth* (Quine 1990, 2).
3. On this topic, his works *Pursuit of Truth* and *Web of Belief* are especially important.

sees natural science an inquiry into reality, fallible and corrigible” (Quine 2004a, 305).

The Incorporation of Religious Teachings in Science

As it was said, Quine is a naturalist—that is, he maintains that natural science can adequately provide answers to our questions about the world—and two main elements of naturalism are empiricism and physicalism: empiricism means that the only evidence for science is empirical evidence (Quine 1969, 75), and physicalism means that the only effective agents in the world are physical agents. Quine also believes in some abstract phenomena like mathematical truths but does not believe in spiritual beings (Magee 2003, 269). However, according to Quine, science is not committed to empiricism and physicalism; they are temporal elements in contemporary science, and it is possible that science desists from them in future. In his *Pursuit of Truth*, Quine writes,

The science game is not committed to physical, whatever that means ... Even telepathy and clairvoyance are scientific options, however moribund. It would take some extraordinary evidence to enliven them. But, if that were to happen, then empiricism itself—the crowning norm, we saw, of naturalized epistemology—would go by the board. For remember that that norm, and naturalized epistemology itself, are integral to science, and science is fallible and corrigible. Science after such a convulsion would still be science, the same old language game, hiding still on checkpoints in sensory prediction. The collapse of empiricism would admit extra input by telepathy or revelation, but the test of the resulting science would still be predicted sensation. In that extremity it might indeed be well to modify the game itself, and take on as further checkpoints the predicting of telepathic and divine input as well as of sensory input. It is idle to bulwark definitions against implausible contingencies. (Quine 1990, 21)

He also writes, “Naturalism is naturally associated with physicalism, or materialism. I do not equate them ... I do embrace physicalism as a scientific position, but I could be dissuaded of it on future scientific grounds without being dissuaded of naturalism” (Quine 2004b, 282).

So, although empiricism and physicalism are temporal and the supernatural may enter the science game, science will remain science if the newcomers successfully pass science's checkpoints (i.e., predicted sensation). Quine mentions another possibility: when things such as telepathy can be regarded as checkpoints. But he regards it as implausible, so we do not discuss it here either. Thus, considering the above quotations, Hylton is right in saying that "Quine's position relative to this tradition (twentieth-century scientific philosophy) is ambivalent. On the one hand, he is its greatest exponent in the last forty years of the century. On the other hand he revolutionizes it, in such a way that one might say that he rejects the tradition rather than continuing it" (Hylton 2005, 182).

Therefore, we can infer two points from Quine's concept of science: first, physicalism and empiricism are tentative foundations of science; second, the reason for choosing this foundation is the successfulness of natural sciences compared to other branches of human knowledge, such as philosophy, until now.

Applying Quine's Theory to Theistic Science

In religions such as Islam, there are at least two kinds of teachings that can prepare the grounds for religion-based science in the sense that was mentioned above. The first kind is some sources of knowledge that can be used to understand certain events in the world, such as veridical dreams. The second kind is the teachings that claim an extraordinary relationship between some events, such as the relationship between righteous deeds and some natural phenomena. If these two kinds of teachings find their way to science, the result can be called religion-based science from two aspects: first, the subject has been revealed by religious texts, and, second, this kind of relation between events is maintained by religious people and denied by atheists. We can explain this by an example.

In the Quran, some dreams are regarded as veridical dreams, which inform the dreamer of some events. In the Quran, the story of Yusuf is narrated, which includes five dreams. Some of these dreams were interpreted by Yusuf, and all his interpretations proved to be accurate. One of these dreams was the king's dream reported in the following verse: "Surly I see seven fat cows which are devoured by seven skinny ones. And seven green ears and seven others dry" (Quran 12:43). Yusuf interpreted this dream by saying that after the next seven years, seven years of famine would begin. "You shall sow for seven years continuously, then what you reap leave it in its ear except a little of which you eat" (Quran 12:47). The next fourteen years were exactly as Yusuf predicted. So, an alleged source of knowledge (i.e., dream) was tested by predicted sensation. The existence of veridical dreams has many implications for the human soul and the world, but their existence is a religious claim. Nowadays, many scientists, including neurologists and psychologists, deny this kind of dreams. However, providing evidence for religious claims about dreams is rather possible. Accepting veridical dream does not deny Quine's naturalism, because the checkpoint of this acceptance is sensory prediction—that is, the checkpoint of theories in natural events.

Other religious claims that may find their way to science are seen in the following Quranic verses: "Now sourly by Allah's remembrance are the hearts set at rest" (Quran 13:28), "And if the people of the towns had believed and were careful of their duty to Allah, we would certainly have opened up for them blessings from the heavens and the earth" (Quran 7:96).

These kinds of religious claims can be tested empirically, and if they can be supported by empirical evidence, according to Quine's description of the nature of the scientific method, we should accept their ontological and epistemological implications. Some of these implications may be the existence of other worlds and the relation

between these worlds. This kind of knowledge may be properly named religion-based science.

Conclusion

There are many teachings in religious sources that can be examined or tested empirically. If adequate empirical evidence is found for these teachings, they can be accepted by science and scientists. If accepted, these teachings will have many religious, ontological, epistemological, and anthropological implications. The ensuing body of knowledge may be considered religion-based science based on two grounds: first, it is inspired by religious sources; second, its theories imply theistic/religious affairs. However, although the production of this kind of science is not impossible, we have a long way to go before its realization.

But what do we want from this kind of science? More control on nature or deepening people's religiosity? Pursing first goal through religious science is not crucial, because science continues its progress in that direction without any need to use religious sources, and the second goal can be achieved through other, or even better, procedures than science. It could be said that religious science is important for those scholars who are naturalists, in Quine's terms, and religious at the same time, and want to their worldview consistent.

Finally, it should be noted that although Quine's theory can support this narrow meaning of religion-based science, it cannot support other important meanings of religious science that were mentioned in the article.

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