Science and Religion: Yes, Virginia, There is a Tertium Quid

The recent past has seen a renewal of the conflict between science and religion. In its present version the conflict appears irreconcilable. Attempts to resolve the debate such as Steven Jay Gould’s notion of dual magisteriums fail to resonate in the present; alternatively, the authors sponsored by or in pursuit of the Templeton prize who mean to reconcile science and religion convince only themselves. Is it possible to remain uncommitted without paying the price of superficiality or sacrificing intellectual probity? The aim of this paper is to articulate a third way which accomplishes this goal.

The first chapter of Genesis will be a synecdoche for what is called Religion. Speaking hermeneutically, the most important verse in the Bible is Deuteronomy 4.6. It makes a claim for the Bible: “…this is your wisdom and your understanding in the sight of the peoples, that, when they hear all these statutes, shall say: ‘Surely this great nation is a wise and understanding people.’” This argues the merits of the book by submitting it to the judgment of the wise who are not part of the community of its intended auditors. Who can be a judge of wisdom other than the wise? It may be the earliest reference to a consensus sapientum. It implicitly enjoins the reader to participate in a dialogue that involves a third party: the wise of the nations. How can we operationalize, that is, put into effect, this injunction?
One solution is to follow the example of the Bible which begins its story of the discovery of the way *par excellence* for human beings with the story of an individual, Abraham; here we also begin with an individual, Socrates, a cynosure of the life of the mind as an autonomous activity, or, wisdom as a cross cultural phenomenon unmarked by the peculiarities of this or that culture or cave. Socratic wisdom, or Socratic ignorance, seems appropriate to the task. It is alive to an aspect of human wisdom that is open to the possibility of permanent human problems. His dictum, “I know that I know nothing,” sheds its paradoxical character if interpreted as a knowledge of ignorance, or, the understanding of problems not their solutions. For example, one knows one’s ignorance about justice not by a good will declaration of one’s ignorance but only if one is able to raise fundamental questions about justice which point to answers without being certain of their adequacy. With this model of open minded skepticism let us begin to read the Bible.

In English, the opening words of the Bible are “In the Beginning…” Here at once we run into a quasi paradox. The English phrase, “In the beginning…” translates one Hebrew word, *bereshit*, which, in Biblical usage, literally means, “in the beginning of…”. That is, every other time it is used in the Bible, it is always related to something else, e.g. in the beginning of spring. Here in its first use, at the beginning, it is used without being related to anything. The first words of the Bible are, literally, “In the beginning of…G-d created the heaven and the earth.” An inference can be drawn rich in hermeneutic consequence. The beginning suggests a problem, an aporia, to use a term familiar to Socrates and to the philosophic tradition. What is beginning at the beginning? Why is it not named? A polemical inference can be drawn. The beginning is a rebuke to those who call the Bible
inerrant. It begins with an aporia that implies a problem with naming the unity whose parts are Heaven and Earth. What inerrant proposition can this be implying? It begins to look like those who defend the Bible’s inerrancy do so as a result of reading it too literally because they read it not literally enough. The point is not that the Bible is not inerrant but rather that the first need is to understand what the Bible is stating in its most universal mode, addressing the wise. This is an issue that all magisterial books raise.

Questions of this sort abound. Who is speaking? What is the authority of this narrative voice? What about creation itself: is creation ex nihilo implied, even allowed for? What does creation mean? Focusing on this last question, will lead to a better grasp of the aporia of the nameless beginning. Creation results in the production of separate things, or, one of creation’s key principles is that of separation. Accordingly, the first act of creation is the creation of that whereby things are distinguishable from one another namely light. The second act of separation or creation, made possible by light and its absence, is that between day and night. One can wonder that there are days before the sun which marks the days and which is created later on the fourth day. This leads to the “most glaring difficulty” of the first chapter of Genesis; whereas the sun is produced on day 4, vegetables and plants are the result of day 3. How can there be plants and vegetables without the activity of the sun?

A structural feature of the first six days sheds light on this difficulty. The first and second days are marked by single acts of creation, light and the firmament, whereas the third day is marked by a double act of creation. On day three the vegetable world is created and
land and sea are separated. Days four and five also see single acts of creation: the heavenly bodies on day four; the swarming beasts on day five. And just as the third day is marked by a double act of creation, so is the sixth day, with the creation of man and the land animals. The structure of the six days appears as a pair of three days which are parallel to one another. Days 1 and 4 are analogous, light on day one and its source, the sun on day 4; days 2 and 5 are parallel: the firmament or air and water on day 2, and the birds and fishes on day 5 that swarm in the air and water; and, lastly, the double creations of days 3 and 6. In addition, and most importantly, all the created items in the second set of three days have a level of complexity missing from the things created in the first three days. Whereas the things of the first three days are separate, the creations of days four through six are separate and capable of separating themselves from stationariness through local motion. This allows for the separation, from the things moving, the background to their motion. Because of this doubleness, the creatures of the second set can be said to be higher, i.e. more important or better in the order of complexity, than those of the first set.

We can conclude that the Bible entails normative inferences based upon evidence accessible through everyday experience. This implies that a cross-culturally meaningful account of the world must be “based on evident distinctions which are as accessible to us as they were to the biblical author,” which is to say that “all the created things are accessible to man as man regardless of differences of climate, origin, religion, or anything else.” Third, the Bible suggests intellectual distinctions based on everyday experience which provide a structural basis for understanding the world and its origins. This includes, separation, the phenomenological basis of sameness and otherness, or
identity and difference, and motion and rest, which are the most fundamental philosophical distinctions.

In other words, we see that Genesis 1 has several functions. It is descriptive, laying out the things of the visible world, of the heavens above, the earth below, and of what is in between. It implicitly suggests noetic or intellectual principles which emerge out of the descriptions, for example, separation, and local motion. It is normative, for example ranking ordering the created things in terms of complexity. Finally, it is etiological, giving an account of the cause or causes of the visible world.

In light of these principles we can see that the place of the sun, late in creation, on day 4, and its description as a “light” which marks days, serve to demote its importance. It is not named. It is a mere light to measure the passage of time. This foreshadows what comes later, the sun is allotted to the peoples, non-Jews, as their god (Deut 4.19). It is merely a time marker, not something worthy of worship. This agrees with the ancient philosophers who observe that the heavenly bodies are the object of natural worship (Plato Epinomis 976c7—992e1, Symposium 190a8-b5; cf. Aristotle Metaphysics Lambda). The descriptive surface yields intellectual distinctions and is in turn organized through a normative goal: demoting the value of the heavenly bodies as objects of worship.

In conclusion, then, the Bible as a synecdoche for religion, allows for a rational observer to weigh its teaching in light of everyday experience accessible to all human beings; further it implies intellectual principles whose rationality is open to examination, and
Lastly, it contains a normative teaching based on this common experience. It does not require any adherence other than the agreement of unaided reason. One last point before we pass on to science to see that it too allows for a tertium quid of rational observation. This concerns the etiological element of the Bible. This is one of the most complex issues raised by Genesis. To pursue it we would need to tackle the issue of the status of the narrative voice, which, to my knowledge, has never been addressed with complete clarity. Only with this answered can we make a firm judgment about the etiological issue. Still, it can be said, that by failing to name the whole as a cosmos, and, as a result, not unified, not the one thing it would be in virtue of having a name, Genesis 1 is true to this part of its rhetorical function: it demotes the cosmos as a unity and hence as a possible object of worship.

A prima facie case has been made for an intellectual honest tertium quid which does not blanch at taking religion seriously nor hesitate at maintaining its independence from a polemical stance in favor of religion over science.

There can be little doubt about the theoretical and practical achievements of modern natural science. Descartes, one of the founders of the modern project whose instrument is modern natural science, claimed that it would make us “masters and possessors of nature.” Theoretically and practically, if only in comparison with Descartes’ day and all prior times, we have taken giant steps towards achieving this goal. Practically, as Descartes would have it, we can look to medicine as the proof of this, while theoretically the strides made in understanding the phenomenon of life as well as the constitution of
the universe solidify Descartes’ claim. This achievement is not without its ambiguities. For example, the claim made some two thousand ago that the human species is one not only biologically but also morally had to wait until the middle of the 20th century to become an existential fact as sure as it is that we are bipedal hominids. About fifty years ago through the power of nuclear arms we became collectively responsible for life on earth, an achievement at best ambiguous in its genesis and charged with risk in its actuality.

With that said, we must ask if science also allows for a tertium quid, an intellectually honest stance which understands without become partisan.

Aristotle makes a distinction with regard to the starting point of inquiries, between that which is first to us and that which is first in itself, with the understanding that the former, everyday experience, is the obvious or natural starting point for inquiries. It is here, thinking about what is first to us, that the tertium quid of rational observation finds a ground common to science and religion, or, more narrowly, to the Bible and the mathematical physics which is at the core of modern natural science. This common ground is where the tertium quid makes its stand. The Aristotelian distinction allows for this in two ways.

First, at the heart of the perceived inconsistency between Religion and Science is a perceived tension between their views of the whole. It is thought that if scientific cosmogonies, with a big bang and an expanding universes requiring billions of years are
true then the Book of Genesis, with its finite view of heaven and earth, its mere six days of creation can not be true. But there is a difference between cosmogony and cosmology. The first is etiological in character; the second descriptive. To be sure the respective cosmogonies are *prima facie* inconsistent. On the other hand both accounts are logically dependent on a common descriptive base, that is, on what is accessible to all human beings, or, the common cosmology of human experience. However much this is open to revision through scientific means of observation which extends the range and character of human experience beyond the eye, nevertheless the original experience is basic to both perspectives. Or, what comes to the same thing, however much scientific cosmogonies and cosmologies may be revised by future discoveries and observations, there are no rational grounds for supposing that the common starting point of everyday cosmological certainty will not remain constant and hence the starting point for all future revisions technical or theoretical of scientific claims.

Aristotle’s distinction also points to a fundamental fact about the procedures of modern natural science. A basic premise of science is that its findings are defeasible or revisable. Because its findings are subject to complex rules of validation, no finding is secure once and for all. For example a day may, with the emphasis on the mere methodological sense of the word “may,” -- a day may come when it is normative science that the law of force which now as we know from Newton’s Principia is \( F=ma \), will be \( F=ma^2 \). On the other hand, there are no rational grounds for supposing that what is humanly first to us will not be the starting place for epistemically confirming science’s laws and hypotheses. However more sophisticated scientific equipment may be at some point in the future, it
will still be a fact that human beings process data through their sensoria and actualize their projects through the dispositions with which human beings have done and are doing so. There is only one thing that can shake one’s confidence in this proposition. We can play with the hyperbolic skeptical assumption whereby the logical possibility of the negation of any proposition is a ratio dubitandi for that proposition. Or, to put it as simply as possible, only an irrational skepticism threatens this common ground. But remember what we need is a rational tertium quid which ipso facto rules out this form of skepticism.

In addition, the theoretical implications of modern natural science raise questions of a permanent character. These questions point to the need for the rational observer to engage science, as well as keep a respectful distance, as readily as religion or the Bible is engaged.

First, its key terminology is in an important respect nominalistic. Important terms, such as force, gravity and energy do not name things in the world. We can imagine them as labels on a jar within which are mathematical formulas descriptive and predictive of the world, demonstrated by deductive arguments as often as not, and many of which have premises linked to observations about the world. But do these labels name the causes of the effects so described? Newton who above all others instaured this mode of understanding the world said it as succinctly as it can be said. He writes in the Principia that he was unable to find “the causes” for the effects under the rubric of gravity that he spelled out in mathematical terms (Principia 530).
Second, because of this science does not yield a clear ontology. More exactly, it does not allow for an understanding of matter. Matter is an amphibolous word. In every day language it names what is tangible. Under the lens of science what it names is anything but tangible; tangibility here is an effect of things intangible, molecules etcetera. What exists if we take our bearings by this second understanding of matter? At the foundation of mathematical physics, Descartes offered extension as a understanding of being or what exists which is consistent with physics. Extension and its many variants, lives with us to this day. These run the range between space, either empty or filled, each either with or without an active principal, each either infinite or not, and, as well, another offering, this by Leibniz, monads, with the same possibilities. These options are open to careful examination in the writings of Descartes, Leibniz, Spinoza, and Kant. It is hard to for me to imagine that future incarnations of the metaphysical implications of mathematical physics are not covered by these possibilities. Whether any scientific or conceptual revolution can bring closure to this aporia in a manner that the ontology implied by mathematical physics is settled probably depends on a solution to the final difficulty with which science confronts us.

Third, and of the greatest importance science raises a fundamental aporia about the relationship of thought and being. With the inception of the new symbolic mathematics that led from Descartes through Newton to Leibniz to what we now recognize as mathematical physics, a fundamental metaphysical issue has been reawakened. No one has given an account of the harmony between the “abstract” – and here the quotes are scare quotes – discoveries of the new mathematics and the stuff of the world, either on
the macroscopic level such as planets or on the microscopic such as electrons. This astonishing harmony between mathematics and the world has been described in many ways, by Leibniz and Kant and others. Its capacity to astonish is our gain. The immense constructions of mathematical physics brought about by the conjunction of these two words -- mathematics and physics -- generates a philosophical aporia, a reminder that Parmenides’ words about the congruence of Being and Thought is not the statement of a solution to a philosophical problem but rather the statement of a problem simpliciter. Our version of this problem was born of the “unknown universe” unlocked by the new mathematics, best represented by Leibniz’ descendants such as Euler. Perhaps a more appropriate metaphor than unknown universe that captures the open ended process of mathematical discoveries unlocked by symbolic abstraction, is Machiavelli’s phrase “new continents” because it serves to remind us of the practical roots and consequences of these new modes and orders.

In conclusion, this paper has made a prima facie case for a tertium quid, that of the rational observer of science and religion, one who remains unseduced by either but enlightened even delighted by both, potentially, on a daily basis.

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