THE BIBLE AND SCIENCE: TOWARDS A RATIONAL HARMONIZATION

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ABSTRACT
At the Society of Christian Philosophers Midwest Regional Meeting in 1992, I proposed a new mechanism for harmonizing and interpreting the Biblical accounts in the light of scientific data and theorizing. I also presented what I believed to be sufficient reasons for rejecting methodologies proposed up to this point. This paper received a fair amount of thoughtful criticism both during and after the conference. William Hasker has been particularly cogent in his criticisms through private correspondence with the author. The methodology is modified in light of objections received during this time period, as are the arguments leading me to propose the new scheme of harmonization in the first place. All objections aside, I argue that my initial proposal is fruitful, interesting, and worthy of further study.

INTRODUCTION
There is little question that few subjects engender as much passion as the question of the proper methodology for interpreting Scripture. I will attempt to briefly present reasons for abandoning both of the most popular methods for harmonizing the truth of Scripture with that of the natural world. This is not to imply that the persons holding these beliefs are "bad" Christians or that my position is somehow more sanctified. We are discussing a group of people who take the theories of science and data of the natural world seriously. It is possible to be handle both sets of data badly without intent to do so. There is a difference between being wrong and being a willful heretic.

The arguments over the status of Scripture and scientific knowledge result from the adoption of two prominent interpretative methodologies on the part of those who try to harmonize the two. These will be labeled the "Galileo Method," and the "Story Approach." First, I will attempt to show that the "Story Approach" to Scripture contradicts certain commonly held notions about the nature of God. My next task will be a careful analysis of what I take to be the more historically important and philosophically interesting Galileo Method. This method will ultimately be rejected. I will examine a new potential approach and discuss some of its implications on the current controversy.

THE STORY APPROACH
Many evangelicals have decided that the attempt to harmonize the data and best theories of modern science is a wrong headed one. The Bible was not written to be a science text book. In fact, it contains no data of scientific interest, except accidentally. These scientists have abandoned "concordism" for a different approach. Most persons following this method believe that many of the Fathers and early Church philosophers give sanction to this approach. They would reject the notion that this is a "new" interpretative mechanism. With the example of Origen firmly in mind, I am inclined to agree with them. The Bible tells ancient stories in which one may find encased the living World of God. The theological truths of Scripture are there to be mined from the mythical tales that bear them. Just as Plato's μῦδος in Timaeus provides a mechanism to delineate his views of the human soul (for example), so too the myths of the Bible aid in developing truth. They are not "false," but literary devices. I will call this the Story Approach (SA).

What do the proponents of the Story Approach say about the relationship between the Bible and science? These persons claim that Scripture is a vehicle for the truth of God's workings with humankind. Historic and scientific accuracy is not essential to the function of that vehicle. Looking for scientific or historical data from the text is foreign to the function of the text. The text functions as a "story" to relate a message. This is why I have labeled this the Story Approach (SA) to Scripture.
This seems an implausible view given the nature of the Christian God. (I am not making the stronger claim that such a view is utterly impossible.) The Story Approach assumes that Scriptures are stories packaged to convey theological truths to scientifically simple persons. The proponent of the SA cannot keep this view of Scripture and a sufficiently robust belief in God's absolute integrity.

One early problem for the proponent of the SA is in distinguishing between science and history. The fairly conservative person must hold that the Bible describes some historical events accurately, in at least some broad manner. To pick the most obvious and important example, if the Christ is not actually risen from the dead, the heart of the gospel has lost its meaning. (This is to ignore, of course, what might loosely be described as theological "liberalism," which would, in some cases, deny any bodily resurrection. The argument with historical liberalism is beyond the scope of this paper.) It is difficult, however, to pick and choose what accounts in the Bible one will take as "serious" history and what accounts one will label as myth. One cannot simply label all those accounts that are falsifiable "myth" and all those that are not falsifiable "truth." The apologetic and argumentative circularity of such an argument is obvious.

I think that there are two general approaches, both of which are faulty. In fact, this issue is one which has rarely been addressed by those who do not read the Bible as "serious" history. How does one distinguish between the false (or mythological) and the true? The quick and easy answer is to rely on some sort of literary methodology. C.S. Lewis, for example, takes this approach in all of his writings that are on the text of the Bible[5].

The problem with this approach is that it fails to clearly eliminate certain passages that cause the chief problems to modern science. Genesis chapter one might (conceivably) be described as poetry and read as such. If the text were completed before the sixth century. The text of Genesis was, therefore, already in distinguishing between science and history. The fairly easy problem of Genesis chapter one might (conceivably) be described as poetry and read as such. If the text were completed before the sixth century. The text of Genesis was, therefore, already in the medium-fifth century, such a literary form would be foreign to the text[6].

The use of myth as a literary device is found first in the Pre-Socratic philosophers and Plato. The first philosopher, Thales, flourished in Greece around 585 B.C. Plato, who clearly used this device, did not flourish until the mid-fourth century. If one assumes the standard JEPD account for the construction of Genesis, then the large parts of the text were completed long before the sixth century. The text of Genesis was, therefore, already largely in place before "myth" as a literary device, in the relevant sense, was invented. The authors of Genesis were not likely to use a literary form that was not available.

The second general approach to the text is to hold to only the minimal amount of history in the text as possible. If the facts of science contradict a particular story of Scripture, then one can abandon that particular story. The historical truth of many stories in the Bible is, after all, of only peripheral value. One could fail to believe in a flood and be a Christian, but one could hardly discard the empty tomb. It is a difference in kind. What would, after all, be lost if the story of the ark is false?[7] On the other hand, it is highly unlikely that any "facts" of science will ever come into conflict with the Jesus coming out of the tomb.

I think that the chief problem here is caused by a Hume-like consideration. The gospels ask us to believe a very improbable thing. They ask us to believe that Jesus Christ rose from the dead. This is a difficult thing to believe, to say the least. The first witnesses to this event had two major arguments for the miracle of the empty tomb. First, there was the fact of the empty tomb and the eye witness accounts of the resurrection by those still living in the community. Second, there was the putative harmony of Jesus' life with the picture of the Christ found in the Old Testament. Later generations of Christians had only the written witness of some of those early followers of Christ combined with the witness of the Old Testament. In our case, our entire rational reason, apart from our own experience, for believing that Jesus is alive must come back to these documents and Church tradition. But if God, when He has spoken in the past has not chosen to communicate with humankind in a historically reliable way, why should we suddenly believe He is doing so now? The fact that the stakes are higher here at the empty tomb should make the questing heart more skeptical, not less.

The flood's historicity impacts geology, while the empty tomb purports to effect all of eternity. Suddenly we are asked to trust the historicity of a record and a God who has not proven trustworthy, or who has not spoken historically before. The record has seemed historical in the past, has even sounded that way (like the story of the Deluge or the court histories of the divided kingdom), only to turn out not to be history after all. Those parts of the record turned out to be pleasing and plausible myth containing spiritual truth. It seems as least plausible to
demand of a putative God that He demonstrate His historical competence to leave a trustworthy record in some easy area to verify by means independent of the text. A candidate would be the description of a major cosmological event that could be scientifically verified for all eternity. How can we, using our best reason, believe His putative record of an event (that by its very nature can never be verified) if such evidence is not forthcoming? It would seem to me that either one must take all the accounts of Scripture that read like the gospels as at least containing history or one must move to the more rigorous mythological view of Scripture advocated by Bultmann.

Let me hasten to say that this argument is limited. It is not always clear that a given account is historical, as opposed to poetry or a mere "story." ("Job" is a case in point.) If we use the gospels as a bench mark for what is Biblical "history," it is difficult to see how some scientifically difficult passages like that of the Flood can be eliminated on textual grounds. (It is important to stress that I am not arguing that the gospels are "history" in the modern sense. For example, "John" may not give a chronology of the life of Christ. It would be another thing to say, as some liberal scholars do, that Jesus never said, in substance, what the gospels claim He said.) If the Flood is eliminated as scientifically false, then one is left to ask why one should suddenly begin to trust the historicity of the gospels on "faith." On the other hand, some accounts, like the account in Genesis 1, are much less clear in terms of their status. I believe my position is a "middle ground" between the two extremes.

One final comment is in order on this issue of history and Scripture. I do not believe that the "history" of Scripture can be separated from the question of its scientific accuracy. If Jesus rose from the dead in history, then some scientific facts of the matter follow. I presume that certain molecules acted differently when Jesus came to life, as opposed to when He was dead. If the Flood was historical, then certain geological consequences follow. In cosmology in particular, science is simply the tool to find a history. How can one separate the task of the historian of the earliest times from that of the cosmologist? If Scripture contains history, then it has scientific implications. Scripture is not a science or a history book in the modern sense of those terms. It does, however, seem to relate events, like the resurrection of Christ, that happened in nature. The historic fact, if such as it is, of the Resurrection has a profound set of consequences for the very notion of "law" in science, for example.

The Story Approach has a further problem, however. Even if one can determine that certain accounts in early Genesis are stories or myths on some grounds independent of the desire to "save the phenomena" of Scripture, the advocate has a severe problem. One can see this in thinking further about the actual picture of God presented by SA.

Suppose God desired to transmit the theological truth that He was the creator of the stars. He wishes to make it clear that the stars are not gods. He decides to use the vehicle of a story, because the "natives" have only a "primitive" understanding of science. This is roughly the state that the SA thinker assigns to God and those peoples who first developed the early books of the Bible. Which would be preferable: a story that was accurate scientifically (so far as it goes) or a story that was inaccurate scientifically (where it does touch on science)? In most cases, God would clearly have the choice of developing either kind of story. It seems clear that the first alternative would be preferable. Why would an omnipotent and omniscient God use a false story to convey His truth? Surely, He could have designed at least a fairly true one to convey the same message.

Of course, it might be conceivable to imagine a situation where no scientifically accurate message (within the limits of the primitive receptor's understanding) was possible. This is not the case most of the time, however. Without believing that God's purpose was conveying scientific truth, the philosopher could wonder why the Genesis story needs to be as inaccurate as it is (when compared to modern scientific theory.) It is certainly the case that of the myths present in the ancient world some were available that were more congenial to modern evolutionary theory (for example) than the one selected by the allegedly inspired writers of Genesis. Wouldn't the selection of the most accurate myth (in the realm of science) have been preferable to a myth that was almost entirely inaccurate? It seems absurd to think that if the one myth could be modified to convey religious truth that the other could not have been changed as well.

William Hasker, a noted philosopher at Huntington College, was kind enough to respond by letter to this argument. Hasker is a philosopher of religion that I owe a great debt in my own understanding of such problems as foreknowledge and free will. His writings are a model of philosophical rigor and Christian commitment. He says his "... sympathies. ... basically lie in the direction of what you term the Story Approach."[2]

Hasker believes that my description of Scripture and the Story Approach are flawed in several ways. First, there is a reasonable way to understand the possibility of God's transmission of stories. Second, the "ahistorical fundamentalism" implicit in my arguments creates a brittle epistemic position. The second criticism is an important one and I will save it for the end of the paper.

Hasker says, "I think your construal of this ("God's situation") is different from the one I would endorse in important ways. Your description seems to fit the situation of, say, a scientifically literate second-grade teacher who needs to explain to her class some scientific matter (say, nuclear fusion) concerning which they are incapable of understanding an accurate explanation. Here I think your conclusion would be basically correct: she should
sacrifice accuracy as needed to make herself understood by her pupils, while still staying as close as possible to what she perceives as the scientific truth of the matter."

"The situation where Genesis is concerned is, as I see it, quite different. We are not dealing with small children who, while quite immature, are growing up within a scientific culture and are at least beginning to absorb a scientific way of viewing things. I think it is of the utmost importance to recognize that the very concept of science did not exist for the Old Testament writers or their readers."[2]

Hasker believes that God used SA as the method of inspiring the human writers because that is the best that those human writers could do within their cultural framework. He concedes in further correspondence [2,2] that when speaking of the Flood, ". . . there is little if anything in the text itself to indicate that this is not a straightforward history. . . . My reason for classifying the Flood narrative as saga or legend rather than history is that (in my opinion) there cannot have been "historical memory" at the time the narrative was written, of an actual historical Flood event of the kind that is described. And my main reason for saying that is that no Flood such as is described . . . actually occurred, as is shown by geological and archaeological record."[4,3]

Hasker is to be commended for the clear insight he has into the situation at hand for the exegete. He does not try to dodge the critical issues. The Genesis text seems to demand a world wide historic flood. He has, however, managed to bring two principles to bear in order to avoid this scientific disaster (as he sees it) for the student of the Bible. First, he allows himself to translate as saga those passages that are scientifically or historically impossible given the best of modern science. This position seems dubious to me for reasons given above. Second, he believes that the historic setting of the Biblical editors themselves forbids viewing the Old Testament documents as historic. Moses (to give the author or editor of Genesis his traditional name) could not have written history, per se, because history as a concept was foreign to Moses.

God would not have addressed scientifically illiterate people in the terms of modern science. The idea of science was certainly not in the scope of the ancient Hebrew writer. If the book of Genesis was written for one small Hebrew tribe in a scientifically illiterate age, then little more would need to be said. Hasker would have proved his point. Having conceded this, however, one is forced to ask if the Bible is not only a document for one time, but a document for all time? If God is speaking merely to the particular Hebrew situation of the moment, then the Bible lacks much interest for the modern. The historical context of Scripture is interesting and illuminating, but not exhaustive. The Bible (for the orthodox believer) is a message to all humans. This is certainly the case in theology where implicit theological truths not then understood (the serpent's head prophecy to Eve is a good example) were buried in the text for later generations to more fully understand. Hasker would concede the development of theology based on these texts. The texts themselves are true in ways that go beyond the theological context of the day of the human author. Why should it not also be the case in history or science? God certainly knew who would be reading the Bible.

I believe the Bible is interested in conveying truth to all humankind at all times. One is, therefore, forced to think of the target of the Biblical message not as one individual (Hasker's hypothetical student in a second grade class), but as a composite of all the individuals in all places and times who will read the account. It should, therefore, convey that truth in a manner understandable to the ancient and to the modern. It should preserve a maximal amount of truth for both readers. This would prevent a fully "scientific" explanation (since most ages in history were non-scientific in outlook), but it would also not permit God to ignore science altogether. God would be constrained to use a story that was as near to truth as possible. The truth of the account would be restrained by the limits of the comprehension on the part of the non-scientific reader. What was the theological message of the Flood? Is it that human sin brings divine wrath and divine mercy? If so, then why tell this important theological story in an utterly false account of a world wide Flood? Why not pick a better story? The ancients surely understand the difference between a true story and a false story.

Hasker sees the Flood account as being a theologioally purified version of the Babylonian account found in the Gilgamesh Epic. He agrees that it is surprising that God would work that way, but correctly points out that one should not be inclined to give God advice on how the Bible should have been written!

This seems a hopeful approach for Hasker. It has the virtue of being tied to the facts. The Gilgamesh Epic is very old, and very similar to the text of Genesis. It seem to me, however, to be inconsistent with certain divine attributes. However, I think that there is a more basic reason to reject Hasker's picture of the construction of Genesis. Put simply, it seems to me that such an image of the Flood account fails because it is too plausible in detail when compared with Near Eastern Flood myths. Creationist scientists would find the process of developing even a simple scientific theory to cover the numerous details of the Epic an even more daunting task than that faced in Genesis! The ark of Genesis is at least a plausible ship-like vessel. The boat of the Epic, a perfect square, is not even a ship in the conventional sense. The Genesis redactor, if we grant Hasker his scenario, not only cleaned up the theology of the Epic, he clearly tried in his primitive way to clean up the science and make the story more "natural." (For example, he had Noah construct a boat that looked like a boat. He allowed more time for the waters to recede.) If Hasker is right, the crucial question is, "Why?"
God could have allowed the editor of Genesis to keep all the "silly" details of the Epic in order to demonstrate that the story was just a myth. This would have been in perfect harmony with the pre-scientific views of the Hebrew writer. Better yet, the editor could have added outlandish details to the Flood epic. The water could have been full of demons and the ship would have been built out of a fig leaf. If the critical thing was the theological detail, this would not have mattered. It would have been preferable because it would have made the later reader less likely to take it as sober history. Instead, God seemed to have used the editors (or they seemed to have acted on their own) to clean up the text historically. They make the story about as historically simple and as plausible as they could. This is hard to explain on Hasker's view.

The irony is that, given conventional scientific theory, the Genesis account is about as wrong as it could be. Other stories of divine retribution without such cosmological problems were available or were shortly to be available. On the other hand, given the Flood stories of the time, it is by far the most plausible. Hasker is in an odd position. He faces a flood account in Genesis too wrong to be divine (or true), but too plausible to be a good saga. What is a person arguing for SA to do?

What then of inspiration and the human author? I would theorize that inspiration, while fixed in the historical setting of the human author, goes beyond the limitations of that author. It is important to know the historical and cultural background of the human author, but only as a key to understanding the language and ideas of the text. One cannot ignore the historic setting, one might miss important clues to linguistic understanding, but inspiration is not limited by it in terms of meaning. The historic situation of the human author is not manipulated by God in the sense of a "dictation theory." Instead, God manipulates the selection of data already in the mind of the author to assure perfect results (or results that are as perfect as possible.) Thus, the ancient had no scientific concept of God to use. We should, therefore, expect no scientific treatises in Scripture. We find none. The ancient author did have a basic concept of truth and falsehood. This happened. This did not happen. These are not modern, Greek, or even very sophisticated notions. God wished, in a colorful and brilliant manner, to express timeless truth. He did so by picking the truest accounts He could get and by telling them in the truest way (scientifically and historically) possible given the cultural limitations of the human author.

Hasker rejects this notion of divine inspiration. He does not believe that God "manipulated the biblical writers so that, unknown to themselves, they wrote words that are (at least approximately) in accord with the scientific truth of the matter. In the words of Henk Geertsma, "God does not send people to others with a sealed envelope."[2] He reminds us of the importance of the truth that often persons who criticize SA speak, ",. . . as if the human authorship (of Genesis) were just an incidental detail that makes no substantial difference. Literally speaking, God did not write Genesis, Moses did (with the help of whatever subsequent editors, redactors, etc.)."[3,2] He points out that, in his opinion, no "conceivable inspired text could be such that major misunderstandings could not occur, given the human propensity for error. But to minimize misunderstandings, probably local and particularized references would be kept to a minimum, leading to a blander and less interesting book. This, of course, is just not what happened."

How can Hasker consistently hold this position? Is it not clear that the passage in Isaiah, for example, dealing with the virgin birth was not at all clear to Isaiah in its full Christian context? It seems clear that Isaiah thought he was talking about Hezekiah. Did the writers of the Old Testament understand the full import of everything they said? It is clear from Paul that they did not. They saw dimly what we see fully. In the same manner, one could argue that the writers of the Old Testament did not understand the full scientific and historical context of the stories that they were inspired to use in creating their account of the world's history. The envelope was not sealed, but there were deeper meanings to the inspired message than the writer and bearer knew. How can one make sense of the gospels' attitude toward the Old Testament without such a belief? If the theological revelation of Genesis is allowed to have progressive and deeper meanings than those originally intended by the author (within the divine economy), then why should their conveyance of historical truth be limited? The writers did not act as dictation machines for the message of God. God could inspire them; however, to select stories and wording that would inspire new levels of truth finding in future readers from a different sociological context than that of the original authors.

Hasker, and those holding the SA, cannot (ultimately) hold their view in the light of these examples without adopting a further exegetical position. Hasker sums this position up, "Your counter-examples do not move me greatly. . . : I do not consider that the New Testament use of Old Testament passages is determinative with respect to the original meaning of those passages. One reason for this is that the New Testament writers often assign meanings that the Old Testament text simply will not bear- or they cite corrupt, even recognizable versions of the Old Testament text. (One example is Matthew 2:23, 'He shall be called a Nazarene.' ) What I would say in those cases, is that a new meaning was added by the New Testament writers which was not the original meaning of the passage in question. That the new meaning was added is within God's will. The new meaning is edifying, spiritually profitable, and so on, but it was not part of the original meaning of the text. Let me hasten to say that I don't claim by any means to understand everything that is going on in the New Testament's use of the Old Testament, but what I have said does define the general contours of my approach . . . ."[4]

Let us concede, for the sake of argument, that Hasker is right in his description of the Biblical text. My Biblical
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divinely inspired. Paul uses the text for apologetic purposes. The use he makes of the text contradicts the actual
purpose of the text. He gives the words a new meaning. No Stoic would be likely to agree with Pauline appropriation of Cleanthes’ poem.

On the other hand, Paul often builds on meanings implicit in a text that are not found in the direct context of the
passage. These were meanings and understandings that were necessarily culturally implicit at the time of the
writing of the text even if the author was not aware of them or able himself to formulate them. I would suggest that
though science and history as concepts would await the ancient Greeks, the implicit concepts of historical accuracy
are found in the detailed genealogies of Genesis whether or not the records themselves are historically accurate
[8]. Seeing proto-history or something history-like, less than the Oxford History of England, but more than the Epic of Gilgamesh is to read into the text only what was necessarily there in order for such writings to be produced. One would not go the great trouble of producing long lists that “work” mathematically without having some of these basic ideas in mind.

The best example of implicit meaning being found in a text is Paul’s use of the text dealing with oxen and grain. Paul makes an argument based on the text that is not foreign to the text. Indeed, I would argue that the image of “not muzzling oxen as they tread the grain” produced the principle in the mind of Paul. Implicit in the text was the larger principle that the laborer is worthy of his or her hire. One need not even assume that Moses was aware of this deeper principle as he wrote the commandment. The larger principle, part of the Mosaic world view formed the specific command. Moses was, as author, providentially shaped to think in certain essentially correct forms and patterns.

I would argue that the New Testament interpretations of the Old Testament are implicit in the paradigms, stories, histories, and images of the Old Covenant. The first born son of a maiden was an archetype placed by God in the text, even if Isaiah intellectually would have failed to realize its full significance. Far from carrying messages in sealed envelopes the Biblical writers, like all great authors, said more than they meant.

This argument does not get one an infallible Bible in terms of history and science. It does not go as far as I might like. It does, however, prevent one from getting a Bible that has nothing to say in those areas. The big details would simply have to be right in a story like the Deluge. The Hebrews may not have been scientists or historians, but they clearly had the first concepts that would form science and history. I would argue that these concepts included a knowledge of the differences between false and true accounts, the knowledge that care needed to be taken in the transmission of information, and the understanding that knowledge of past events could be a powerful tool to be used or misused. The Hebrew writers or editors were capable of writing essentially true accounts. Why would a reader believe that a truthful God help create a text that was not accurate in these areas?

The Christian god is usually held to be perfectly truthful in all his dealings. God, in the words of the Bible, “is not a man that he should lie.” This attribute is taken to be a necessary feature of a morally perfect being. What would this mean? An example might clarify the issues involved.

Suppose one scientist, Hope, wants to tell another person, Aino, about a scientific experiment. Aino, a musician, is not capable of understanding all the mathematics involved in Hope’s highly complex work. Is Hope deceiving Aino by giving her a rough-and-ready explanation of the experiment? I think that our intuition is that Aino has not been deceived. Aino has been given the best explanation she is capable of hearing. This intuition might be made more formal in the following manner:

*1: It is possible that a being \( x \) is perfectly truthful, if and only if \( x \) is as accurate as \( x \) can be in conveying information to any being \( y \).

Notice two implications of this definition. First, this is not a sufficient definition of perfect truthfulness, it is simply a necessary condition. Second, as with our earlier example of Hope explaining the science experiment to Aino, the being \( x \) can be perfectly truthful and still be at least somewhat deceitful, if such deceit is accidental in dealing with certain sorts of not-very-knowledgeable beings.

To expect any Scripture to be accurate (fully) would be to prevent a god from speaking (meaningfully) to scientifically “primitive” peoples. A fully accurate message from an omniscient God would be very long and complex account indeed. It is doubtful that even modern society would understand it. As we have seen Hasker attempts
to argue that this means God has no need to prove an account with any scientific accuracy. I have shown that this is going to far. Definition *1 does not prevent God from telling the most accurate possible story given His message and the limitations of the best possible messenger. God might be prevented from delivering the full Origin of the Species to early humankind, but it would also prevent him from delivering the Genesis account (assuming the truth of evolutionary theory). It is hard to imagine that the Genesis account is the most accurate possible story, even taking into account ancient language limitations. Many mythologies, including those of the Asian Indians, have been taken by scientists to harmonize more neatly with an evolutionary cosmology.

The theologically conservative person arguing for the SA believes that God is introducing new theological truth using a story. This truth is of such a profound meaning that it still retains great spiritual import thousands of years later. God is introducing this new truth through the medium of a person to whom it is "new" revelation. Yet this same God, who can devise a story to transcend culture in the case of theological truth, cannot seem to do so in the case of empirical data. He cannot, for example, devise a creation story that follows an evolutionary framework. In fact, He is forced to rely on a story that is pretty much false scientifically.

Is this at all plausible? One might claim that the scientific truth is so complex in comparison with the theological truth that the one was possible to convey to a primitive society while the other was not. This does not seem like a very hopeful objection, however. If evolution is true, it is not difficult to crudely describe it. Philosophers such as Empedocles did this in a rough-and-ready way in the ancient world around the same time as the completion of Genesis. The mechanism and details of evolutionary theory are highly complex. I am not suggesting God had to give these. But would it not be the case that a roughly evolutionary account of God's creative acts would be preferable to roughly non-evolutionary account (if evolution is true)? God was capable within the context of the ancient world of relating a coherent, roughly evolutionary account of creation. In fact, it is necessary if He is to be seen as potentially a being that is perfectly honest.

Another example will demonstrate this point. How complex is the concept of the Earth being very old? It does not seem inherently any more complex a concept than the "young earth" genealogies provided in the Biblical chronicle. The account of an "old earth" would no more have to detail the complexities of geological history, then the genealogies of the actual Old Testament have to give the science behind the aging process in order to be understandable.

If God had said through the prophet, "I made the world. I did it long ago.", there would have been no conflict with modern scientific theory. In the final analysis, why would God use a story at all? If the account could not be told with a (reasonably) accurate story, then why not give the theological truth and be done with it? Was this false information put there to test us? The whole notion begins to sound incredible.

The proponent of SA cannot argue that the purpose was literary merit. There are many beautiful evolutionary cosmological accounts in ancient literature. The Greeks certainly told some stories that harmonize (factually) much better with modern science than the Genesis account. God could have told a story like theirs, but with the proper theological content. If God speaks through stories, then the Bible is probably not the best candidate before the reader of a divine story.

It might be argued in the end that all of this misses the point of the SA. Scientific truth is just not, at all, the thrust of Scripture. The Scripture is no more interested in science than is J.R.R. Tolkien in Lord of the Rings. Tolkien created a story, a very lovely story. In doing so he conveyed certain religious truths about the actual world to some people. The scientific accuracy or inaccuracy of his story was irrelevant. To call such a story inaccurate, or less accurate, when compared to another is to miss the point of myth.

There is something odd about this argument when applied to Scripture. The proponent of SA usually believes that Scripture is, in some way, the revelation of God's word to humankind. Why is God disinterested in conveying to humankind generally accurate knowledge about the world along with "spiritual" knowledge? One can readily attribute a motivation to J.R.R. Tolkien for doing so. Creativity itself allows an unlimited variety of themes based on the score of creation. It is difficult to see why God, who is perfectly true in all His ways, should wish to do so in his primary word to Humans. A composer does not write a variation, before writing the main theme.

The God of the SA is placed in a non-falsifiable position. He tells the truth in His Word only in those areas where empirical verification is impossible. He does this for no apparent reason. He does this in language that suggests empirical content. The SA seems very unlikely.

What can the proponents of SA make of all of this? Hasker has suggested that my statement *1 is too strong. He proposes:

1': It is possible that a being x is perfectly truthful, only if x never deliberately misleads any being y except where this is warranted by some morally overriding objective.

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I do not think that *1 is in fact too strong. I am tempted to think that the phrase "morally overriding objective" in 1' is too ambiguous to be very useful. For all that, however, I believe that 1' does capture an interesting and important notion about God's nature. Since God is morally perfect (unlike humans) there is no need to fear selfishness in His objectives.

What are God's morally overriding objectives in the case of misleading the world regarding early human history? Hasker believes, in the light of Proverbs 25:2, that God does not reveal things in a full way so that humankind may have the pleasures of finding these things out.

Hasker argues that the fact that some persons are deceived by the approach taken in Scripture is not of great consequence. He says, "I would say... in the language of double effect, that the fact that some people are misled is 'foreseen but not intended' by God." God cannot be held responsible for our blindness and folly. God is very clear regarding the plan of salvation, an area where humans could not reason their way to truth and where error would have eternal consequences. God fulfills the requirements of 1'.

I agree that God is clearly not responsible for every off the wall reading made of the text by David Koresh or a seminary professor! In these cases of course, it is not God who deceives at all. 1' would not apply to eccentric or confused readings of difficult passages. God can also conceal an item that He does not wish us to know. The principle of double effect does apply to God.

Most of the people of faith in most places at most times misread the book of Genesis if Hasker reads it correctly. Hasker even concedes that on textual grounds alone it is impossible to tell that Genesis is not somewhat historical. On the face of it, this seems far more like a massive and harmful deception, than a misunderstanding. It does not strike one as a secondary affect of reading, but a primary one. (Of course, this assumes that Hasker knows what God intended the text to cause primarily.) Hasker has four options to explain this appearance of deception:

(A) The text deceives and does not meet the requirements of 1'. the text is not from God or God is not perfectly truthful.
(B) The text deceives, but the deception escapes condemnation under 1' by being compelled by serious moral objectives.
(C) The text is from God, so the errors must not be real but imagined. The errors must be in our scientific theory or in our reading of the text.
(D) The deception was not God's intent. The deception was the result of human failure; therefore, neither God nor the text were involved in deception.

Option A is unacceptable to Hasker as a Christian. Option B would require serious moral objectives to be served by such deceptions caused by Genesis. It is difficult to see what such objectives would be, nor does Hasker supply any (with the exception of believing that God delights in our seeking such things out for ourselves.) Option C is the traditional approach and would include the work of most creationists. Hasker rejects such "concordism." Only option D delivers God from the charge of deception, but I have already shown that D is implausible.

What would a deception look like that was not part of my moral responsibility? It would look nothing like the deception caused by Genesis. Intent alone is not enough to shift moral responsibility. It is not my fault only if you take me the wrong way (given no intent on my part to deceive) and a reasonable person would not take me the wrong way in the context of what I had to say. If I shout to you that there is a snake in the grass (knowing secretly that the snake is made of rubber), then I cannot blame you for being afraid to venture into the yard. I cannot say that the deception was not my intent and blame you for your fears. A reasonable person in your position could not know the truth from what I said. I have deceived you through my lack of clarity. My lack of bad intent does not deliver me from the responsibility not to unintentionally deceive by meeting common standards of clarity. I must speak so that my audience can reasonably be expected to understand what I am saying and not be deceived by it, otherwise such deception and the consequences of it are my moral responsibility.

One might apply the reasonable exegete standard to the Bible. Would the reasonable exegete in most places and in most times be led to fairly serious errors by the text? If she would, then the text deceives, whether the author's wish was to do so or not. A reasonable exegete is led astray by the Bible time and time again according to Hasker. The audience for Scripture, particularly the initial audience, was led to totally false conclusions about the world because of the text.

The deception and errors of the Genesis are not a secondary effect of the text. If in fact several theories of modern science are true, error is a primary result of reading the text. The false history and the bad science cannot be weeded out from the true theology. One does not blame the gardener for weeds that spring up in his garden, but it is another thing altogether if the gardener plants them there or idly watches them grow.

It seems to me that the theological truths of Scripture are inextricably linked to the story and its details that worsen this tendency to deceive. Paul, for example, in Romans makes important arguments based on the federal headship.
of Adam over humanity. This compounds the initial problem. Instead of letting the deception that Adam was "real man" rest or revealing it through his use of the story, Paul is inspired to repeat the story in such a way that the deception is only increased.

The SA person cannot even argue that the Biblical accounts are illuminating fiction. A novel by Dickens is not true, but it is life-like. As a result, we can treat it as true for the purpose of learning certain lessons. In so far as it is not life-like, the message of the book is weakened. (A character who acts in an improbable manner weakens the thrust of the book.) Assuming that the science and history of Genesis have been falsified leaves them more in the position of fairy stories. They are tales of things that did not happen and that more importantly could not happen in the world as it is understood by modern science.

An appeal to literary beauty would not help Hasker, either. The story "Cinderella" contains (I presume) several interesting lessons. I cannot say, however, that I take these lessons more seriously because they are, in the words of Disney, "in the sweetest story ever told." The fact that the story of Cinderella is not true weakens our attention to its moral message. It is just not the sort of thing that actually could happen, so its value as a lesson is diluted. Modern feminist writers have had a field day with this very point. Women who wait for their Prince might as well be waiting for their fairy god mother. The same can be said for the Fall and Flood accounts. They are certainly not the sort of thing that happens in our experience. They are also, if modern science is to be believed, wildly improbable.

Hasker cannot escape 1'. God does deceive people, if we believe that the science and history of Genesis are not true. Double effect cannot deliver God from this charge.

There is a further problem. Hasker has missed another important condition for perfect truthfulness. I would modify 1' to:

1": It is possible that a being x is perfectly truthful, only if x never deliberately misleads any being y except where this is warranted by some morally overriding objective z and x misleads y only to the minimum required to bring z to pass.

This addition captures the intuition that a morally overriding objective will not justify any lie, but only that lie which will achieve a moral end. For example, the person hiding Jews from the Nazis is justified in telling some lies, but not just any lie. They may only tell lies (if they wish to remain perfectly truthful) that advance their moral end. One could not, for example, tell the guard that she was a full professor of Biology at the University of Amsterdam or that the moon was made of green cheese. One would be fully justified, according to 1", in denying that there were no humans in the basement even if there were humans there in order to save lives. A person should deceive the guard only to the extent needed to save guard human life. The person hiding the Jews should not, for example, continue their deception past the point where it is necessary. One should not over elaborate on one's deception.

There is no reason to tell redundant lies.

This leaves Genesis a huge problem for the person holding to the truth of SA and 1". Genesis, if modern science is to be believed, is shot through with unnecessary false hoods. What moral end, for example, is secured by telling or including the story of the Tower of Babal that could not have been served by a much less deceptive means? If Genesis contains scientific errors, and so the SA person argues, then it contains many errors that fail to meet the requirements of 1" that such misleading be done minimally. Genesis elaborates on its myths with long genealogies that serve no function in a SA. They are not true. They do not contain moral teachings. Why are they there? They are redundant falsehoods and fail the test of 1". One could easily imagine God inspiring a person to tell a false concealing story, but in such a case it would lack redundant false detail. Hasker will have to explain why Genesis is as "wrong" as it is.

I should make one final point about my own position. I do not believe that the science or history of Genesis is hopeless. I am not totally happy with any current harmony of Genesis with the data of science. I believe there are, however, grounds for thinking that progress can be made in this area. Personally, I cannot conceive of morally sufficient grounds for God to deceive humankind about the creation event.

One final point should be made about Hasker's approach. Hasker believes that it is the place of humans (kings) to find things out that God conceals. This is Hasker's overriding moral reason for God's deception.

The problem for Hasker is that creation is not the sort of event that humans could "know" on their own. If God, for example, created with the appearance of age or history, then how could a human being ever discover this fact? The age of the cosmos has great theological and metaphysical implications and yet that is the very sort of question that science can never answer with certainty. God was the only being present at creation according to all Christians. Events like creation are not repeatable. Creation is a singular event. Why would God conceal something that by its very nature only He could know? Since this impacts humans whole image of themselves, why would He do so?
If the SA approach is valid, at best it seems to be a method of showing that the Bible probably does not contain the Word of God:

(1) God used stories to convey theological truth.
(2) If possible, a story that is more scientifically accurate is preferable to one that is less accurate. If it is not possible to be more accurate, an inaccurate story is acceptable to fulfill 1.

OR:

(2) God should tell stories that deceive humans as little as possible.
(3) It is possible to think of a simple Eastern story more accurate scientifically (given the claims of modern science), then the Genesis account.
(4) God always acts in the best possible manner.

Therefore: The Bible is not the Word of God.

This is clearly not the intent of those who have developed the SA method. However, if each premise above is true, then SA has an unintended result. The key to the argument is premise two, which Hasker and the followers of the SA would modify or deny in important ways. At the end of the day, I have yet to hear an important modification or defense of the SA that would lead me to deny the conclusions of the argument, if the SA is the only way to go.

Why should we accept Scripture? This is a complex issue, outside the scope of this paper. I believe it must be based on more than a personal experience with God, though such experience is vital. What assurance do we have outside of ourselves and others like us, who may be deceived in the same ways, that this Bible is the very Word of God? Surely, it is important that there be some independent confirmation of the reasonable nature of our faith in Scripture. I do not believe, in the end, that Christian faith in the Bible’s message lacks empirical content. The apostles pointed to an empty tomb. Modern Christians do not have the luxury. We have only a text. Can that text be trusted to tell Christians the essential truth? If it is clearly wrong in its science and history, areas where moderns have the sharpest insight, should the Bible be trusted in the much murkier areas of faith and ethics?

THE GALILEO METHOD AND THE GRAND THEORY SOLUTION

The scheme of harmonization I have labeled the “Galileo Method” was described by Galileo Galilei in his treatise The Authority of Scripture. He says, “Since the Holy Writ is true, and all truth agrees with truth, the truth of Holy Writ cannot be contrary to the truth obtained by reason and experiment. This being true, it is the business of the judicious expositor to find the true meaning of scriptural passages which must accord with the conclusions of observation and experiment, and care must be taken that the work of exposition do not fall in to foolish and ignorant hands.”[1,519] Galileo then proceeds in this section to harmonize the account of the sun standing still found in the Book of Joshua with his heliocentric view of the cosmos.

This method of harmonizing Scripture with empirical data makes the interpretation of the Bible dependent of scientific fact. Roughly speaking, Galileo would have the Christian read the Bible through the lens of empirical data. This has become a common approach to the interpretation of the Bible within certain Christian circles.

This view has one basic advantage. It gives the person approaching the Bible a means to solve certain interpretative puzzles. The legendary (and somewhat mythical!) arguments over a flat or spherical earth are a case in point. Either reading could find Scriptural support. For example, the Bible speaks of the “four corners of the Earth” in Revelation 7:1. This could be interpreted poetically (as all evangelical commentators do now) or it could be interpreted literally. If interpreted literally, one could extrapolate from this reference to a rectangular Earth. On the other hand, Isaiah 40:22 which says that, “It is He who sits above the circle of the Earth...”[12] might be seen as textual support for a spherical Earth. This is especially true if it is read in the context of Job 26:7.

How does one decide which way to read the text? On the Galileo Method, the solution is simple. Modern science has determined that the Earth is spherical. Since Scripture is true, it must actually teach a spherical Earth. All references that seem to imply otherwise must be harmonized with the scientific data. Where science is silent, the exegete is free to pick the interpretation most natural to the text as a whole.

There are two essential problems with this methodology. First, it makes Scripture potentially non-falsifiable. Second, it frequently fails to take into account a distinction between observations and the conclusions based on observations. It is overly simplistic and too trusting of whatever scientists of an age happen to accept.

If this approach is adopted, then it is difficult to see under what conditions the Bible could be shown to be scientifically false. The persons accepting this notion are committed to the truth of the Bible when it relates to science and empirical data. There is something troubling about the fact that there is no built in limit to the amount of accommodation possible. What is meant by the statement “The Bible is true” if accommodation proceeds past
Theories of science are not the same epistemologically. All the "facts" or "theories" of science do not have the same epistemic certainty.

The advocate of the Method accepts both the truth of Scripture and the reality of certain scientifically observable phenomena. He or she remembers Ockham's Razor in relation to scientific theories and chooses the simplest interpretation to fit the data. But the proponent of the Method has forgotten that as a presupposition of his or her work the Bible is also true. This assumption has equal presuppositional status within the argument. The simplest exegesis of Scripture is also to be preferred.

In the Galileo Method argument, the truth of Scripture and the phenomena of science carry equal weight. What has been assumed is that the "facts of science" are just that, facts. In most cases, the "facts of science" are interpretations, which are more or less plausible, to explain certain phenomena. The phenomena themselves have a high degree of intuitive plausibility, but the theories have much less. It is perhaps possible, as W.V. Quine suggests, that two mutually contradictory theories could be postulated to explain the phenomena.

Theories of science are epistemologically similar to interpretations of Scripture. Both are good in so far as they explain the data at hand. It is not always a matter of some brute fact conflicting with a particular reading of Scripture but one interpretative framework confronting another. This weakens the plausibility of the conclusion of the argument.

Lines one through four of the argument form a valid argument, though one can reserve judgement on the truth or status of the individual lines. Line five, however, depends on the faulty epistemological notion that all the conflicts are between "Biblical interpretation" and "scientific facts of the matter" for its plausibility. In some cases, the conflict is between two interpretative frameworks of varying elegance and simplicity.

I would like to suggest that scientific "fact" and "theory" operate more like a continuum. There are certain brute facts about the world. These are very certain descriptions about the cosmos. An example might be, "there is a tree." These should take priority over any interpretation proposed of Scripture. If the Bible seems to say that there is not a tree over there, then (if the Bible is true) the simplest exegesis would have to be modified. An actual Biblical example might be Jesus' description of the mustard seed. He describes this seed as the "smallest" of all seeds. The most natural interpretation would be that, in fact, there were no smaller seeds than the mustard seed. Of course, science might find a smaller seed. In this case, the "fact of the matter" and an interpretation of Scripture conflict. Scripture must be reinterpreted if it is to remain "true." Another example is the prophesy that declares "a virgin" shall conceive. Contextually "virgin" is not the most natural interpretation. Further revelation in the New
Testament reveals to the reader that the obvious or natural interpretation is not always the best or "right" one.

On the other hand, some natural interpretation of Scripture based on the whole of the text might conflict with some theory of science. If there is another interpretation of the data that preserves the natural meaning of the text, it is to be preferred. I take it that evangelicals wish to preserve the most natural meaning of scripture if possible.

This model of interpretation might be based on two scales:

<table>
<thead>
<tr>
<th>A. BIBLICAL KNOWLEDGE</th>
<th>B. SCIENTIFIC KNOWLEDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>III. Allegorical / Mythological</td>
<td>III. Highly Complex Theory</td>
</tr>
<tr>
<td>(possible)</td>
<td>(possible)</td>
</tr>
<tr>
<td>II. More Complex Exegesis</td>
<td>II. Fairly Complex Theory</td>
</tr>
<tr>
<td>(plausible)</td>
<td>(plausible)</td>
</tr>
<tr>
<td>I. Natural Exegesis</td>
<td>I. Simplest Theory</td>
</tr>
<tr>
<td>(probable)</td>
<td>(probable)</td>
</tr>
<tr>
<td>Raw Data of Text</td>
<td>Phenomena of the Cosmos</td>
</tr>
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The scale would allow for gradations between points. The object of the person harmonizing Scripture would be to get the simplest scientific theory in combination with the most natural possible exegesis. All evangelical theories of the world must include both the input from Scripture and the input from science, so that the simplest coordinated theory would be preferable. This might be called the Grand Theory (G.T.) describing and resolving conflicts around the phenomena.

The extreme end of the scale (point III) should be avoided in the G.T. if at all possible. A theory that contains a major component that is barely possible (despite the fact that the other major component is a probable explanation) is not as intuitively satisfying as a theory that contains two fairly plausible components. Hence, on the assumption that both natural and divine revelation are equally valid, one would desire as balanced a G.T. as one could get.

I do not claim that this would resolve all conflicts between science and Scripture. The question of whether a probable reading of scripture combined with a plausible scientific theory would be preferable to a probable scientific theory combined with a plausible reading of scripture is not yet resolved. For example, I would take the argument over the day-age interpretation of the Hebrew word "yom" in Genesis 1 to be such an issue[10].

It would resolve many types of conflicts between science and Scripture. A case in point is the historic controversy over the movement of the Earth. The bulk of the Bible seems to support a still Earth on the most natural reading of the text. Such a reading would be a position (I) reading. The Aristotelian theory of the cosmos was for some time a position (I) scientific theory. There was no conflict between science and Scripture: both divine Revelation and scientific theories were in the "best" positions. Following the introduction of the evidence supplied by certain late Medieval natural philosophers, the Aristotelian theory remained plausible but no longer was the most probable theory. However, on my view the Church was right in maintaining the classic unmoved earth position at that stage of the dialogue. Only when such a position became mathematically and observationally "hopeless," should the Church have abandoned it[11]. This it, in fact, did.

This theory also has the virtue of being ultimately falsifiable. Only possible interpretations of Scripture and possible scientific theories are permissible. If a Hebrew word, for example, will not bear a certain translation at all that a given scientific theory makes necessary, then Scripture will be shown to be false. If on the other hand, one should give priority to Scripture (and this issue has not been resolved by this paper), then a given scientific theory will be shown false by an absolute contradiction with the Word. My theory has the value of removing the possibility of this ultimate conflict from most attempts at harmonization.

CONCLUSION AND FINAL REFLECTIONS

My proposal places the Christian in a potentially destructive apologetic position. "Evidence that show Scripture to be mistaken will destroy the foundation of the Faith." This could happen. It is also a fact that the best current science, by which I mean the majority theories in several scientific fields, point away from the truth of the Genesis account. Since one can still be a Christian and accept something like the SA, and since the arguments against the SA are by no means the sort that "utterly defeat" the approach, why not just adopt the SA? Hasker, as usual, sums it up best. "We have the following three propositions, each enjoying significant support:

(1) The Bible is the vehicle for God's revelation, in which we learn (among other things) about redemption from sin and the gift of eternal life.

(2) If the Bible is the vehicle of God's revelation, then what it says when it speaks in matters of science
and history must be at least approximately correct, within the limits of the capacity of the original readers to understand.

(3) The contemporary sciences of astronomy, cosmology, and geology are correct in the broad outlines of what they say about the history of the earth and the universe.

Each of these propositions, as I have said, enjoys significant support--yet, when we add to them the manifest content of Scripture they cannot possibly all be true. The question, then, is: Which one should be rejected? . . ."

Hasker eloquently contends that 2 should be rejected. He points out the staggering loss in scientific terms for rejecting 3. He also points out the great spiritual loss of rejecting 1.

I do not believe that Hasker can, however, keep science and history distinct from the revelation of Scripture. My arguments have led to the conclusion that such attempts founder. Hasker's points one and two inevitably collapse in on each other leaving us to reject the totality of revelation or the modern theories of science. If this is true, then my new harmonization schema is the best candidate left on the field. Creationists must then proceed to construct better theories of science to compete with those that currently hold sway.

If, however, Hasker can sustain his separation between 1 and 2 despite my arguments to the contrary, his approach is the most prudent for Christians to take given the current state of affairs in the sciences. Prudence, however, need not hinder academic risk taking. Christians can, despite the risks involved, attempt to create an alternative scientific paradigm that will allow the theories mentioned in point three to be replaced. Such a new view would be worthwhile in avoiding the seeming conflict, a painful one for many of us, between Scripture and science. I would argue that my Scriptural harmonization scheme be used during this attempt. If such an alternative science can be developed, Hasker himself would seemingly be congenial to it. This leaves the creationist philosopher and scientist with a daunting, but exciting challenge.

ACKNOWLEDGEMENTS

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REFERENCES


[7] Review comments by Peter VanInwagen of Syracuse University on this paper.

[8] In other words, I am not commenting on their accuracy one way or the other. If they are not accurate, the author showed by the care taken in composing such a precise list (with dates that, for example, have no patriarch but Noah living past the date of the Flood) that such historic care was lurking in the shadows at least. Such lists could not be composed without many of the basic principles of historic research being implicit in the mind of the author.

[9] In using the terms "natural" and "simple" to describe Biblical interpretation, I am not committed to any one hermeneutic. Perhaps, a natural interpretation is one that is coherent and agreed on by all parties.

[10] Let me be clear about my own position. For exegetical and theological reasons, I reject the "old Earth" position.
I should say that this is not a justification for the Inquisition. Rejection of a theory and the persecution of its proponents are two different things.

All scriptural references are from the New King James Version.