

At the Intersection of Myth and Science: Protoscience in Ancient Mesopotamian Omens and the Hebrew Bible's Primeval History

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Abstract

The narratives of Genesis 1-11 are often seen as being in opposition to the scientific theories of the Big Bang Theory and Evolution. The discourse around this conflict affects how these theories may be taught in schools, including public schools. This article seeks to provide an alternative way to understand these biblical myths that respects the texts and the authors and people behind them by examining the protoscientific aspects of ancient Mesopotamian mythology and the narratives of Genesis 1-11. Rather than viewing these texts as a literal description of the origin of the world and life or dismissing it as metaphor, I show that both the authors of the ancient Near Eastern texts and the Hebrew Bible draw from observations to describe the world while differing from the scientific method in keyways. This perspective encourages the discourse to move from a strict dichotomy between myth and science and promotes increased respect for the people of the ancient world.

“After all, I believe that legends and myths are largely made of ‘truth’, and indeed present aspects of it that can only be received in this mode; and long ago certain truths and modes of this kind were discovered and must always reappear” (Tolkien, 1951, p. 147). Though the truths that J.R.R. Tolkien here refers to are that of the fall and redemption of humanity found in many versions of Christianity, his thoughts, here and elsewhere, on the mythological and fantastic provide an entry point for exploring one facet of the complex relationship between myth and science. Far too often mythology and religion are seen to be opposed to science and facts; I propose, instead, that ancient myths were protoscientific endeavors, though they bear little resemblance to modern science. They were both based on observation and an attempt to understand and interact with the world and firmly rooted in mythical view of the world.

The ancient creation myths, including those found in the Primeval History of Genesis (Gen 1-11) do not represent a historically accurate depiction of the beginning of

the cosmos or even just the earth. They do not represent the scientific method nor present the findings of such. However, these myths are part of traditions that examined their world and tried to draw conclusions from observation. They then applied their conclusions to the world in an attempt to control and shape aspects of it. However, these elements were connected to their understanding of the divine, perhaps even the “magical.” Together, the observational analysis and mythical lens create a kind of protoscience, both familiar and alien to the modern thinker and with leaps in logic that may seem mind-boggling to us today.

In this paper, I will discuss the intersection of observation and myth in the omens of ancient Mesopotamia and the primeval narrative of Genesis 1-11. In this brief discussion, the protoscientific world views will be highlighted, including specific ways in which they do not meet the standards of scientific rigor. The goal here is not to elevate these sources to the level of the hard sciences. Rather, through these examples, to show that prescientific ancient communities were intelligent and thoughtful and as interested in understanding the world as we are now. Their starting points and presumptions were different from ours, but we have the advantage of what came before us to serve as a foundation. We do not need to accept their methods or conclusions, but we should respect them for their protoscience and curiosity.

Omens as Observation and Divine Discourse

Diviners engaged in a rigorous study of the organs of sacrificed animals and the movements of heavenly bodies in order to predict and even control the future. The Mesopotamian collections of omens can be argued to have “the character of empirical scientific activity” (Van Setters, 1983, p. 77). They are records of observations about the natural world and corresponding human events, for good or for ill. Compilations of omens would then be the data for future conclusions and the means by which to decide the course of action to alter undesired outcomes. Of course, the limits of how empirical these omens can be considered is in the fact that the omens themselves were still seen to be communications from the gods to be interpreted by diviners, those with the knowledge to do so. After all, the primary sources for these omens: animal livers used in extispicy and the heavenly bodies, the sun,

moon, and stars, were seen as the “tablets of the gods” (Koch-Westenholtz, 2000, p. 3).

According to Feyerabend, lists such as omens lists are the “oldest scientific works” (Feyerabend, 1987, p. 18). He further asserts that the knowledge of the gods does not indicate that “their glance penetrates the surface and perceives a hidden unity beneath events” but rather “they have the most complete lists at their disposal” (Feyerabend, 1987, p. 18). Thus, application to gods and myth to interpret the phenomena recorded in the lists is a natural extension of the compilation of data. The connection to the mythical reflects an attempt to approach a more complete knowledge and understanding of the world.

The ancient Mesopotamian medical practices are a clear demonstration of both the observational and the mythical, though here the two had some degree of separation. Two kinds of ancient medical practitioners can be found coexisting: the physician and the exorcist (Geller, 2016, p. 30). The physician may have used incantations alongside procedures and medicines, but they were different from those of the exorcist and perhaps even nonsensical. The non-mythical elements of the work of physicians included plants with antibiotic properties and resins and spices that were antiseptic (Majais, 1999, p. 134). Alongside physicians who treated illnesses were the exorcists who used “magic” to “elucidate the nature and causes of illnesses” (Geller 2106, p. 30) and thus alleviate the root cause. Even in the mythical healing role of the exorcist, careful observation can be found. The use of omens, particularly of those “written” in organs of sacrificed animals, were useful for diagnosing through the application of sympathetic magic. The reading of organs was refined over time, with observation and a kind of “test-retest” approach to the data. This close reading of organs means that the ancient texts detailing the anatomy of the particular organs “have value as identifying an awareness of anatomicopathologic alteration in organ structure and topography or position that may have been linked to the idea of disease” (Mujais, 1999, p. 138).

Another example of how ancient Mesopotamians applied their observations can be seen in the substitute king ritual. In this ritual, triggered by omens that predict the death of the king including eclipses, the king is substituted with someone else for some measure of time. The substitute king could be a condemned prisoner or the result of a politically motivated choice. During the reign of the substitute king, the true king would be known as “the farmer.” At the end of the set time, the substitute king and his queen would be killed and given all the appropriate funerary rights and honors and the true king restored to his throne (Parpola, 1983, pp. xxijf).

The interpretation of the eclipse itself, whether it was a bad omen and for which nation and king it was meant, came from a detailed study of the eclipse in relation to the planets, the portion of the sun or moon affected, and the direction of the eclipse. Again, though this interpretation cannot be considered scientific from our modern view, it was built upon close observation and collection of data over centuries. They studied and observed the celestial phenomena and connected this to their mythic understandings of the interaction between gods and peo-

ple. The kings were understood to have become kings due to the will of the gods (Parpola, 1983, p. xxiii), and so the gods would be well within their rights to remove a king. However, they also seemed to believe that the gods could be tricked into accepting the death of any king of the given nation rather than the true king.

Test and retest seemed to prove this hypothesis. In the vast majority of cases, the gods did seem to accept the death of the substitute king and the true king was able to resume his position. Every time, or at least most every time, that this theory was tested it was proven true. Of course, modern science would not accept this conclusion. The flaws are easily seen. There is no rigorous control group, no study as to whether the king would be spared by the gods without the substitute death. While it is observation and repeated trials, it demonstrates two fallacies that scientists are all too familiar with: the conflation of correlation and causation and confirmation bias.

The substitute king ritual also requires that the rare exception be explained rather than allowing that the hypothesis could be falsified. Enlil-bani (king of Isin; regnal years: 1860-37 BCE) was originally a substitute king. When the true king, the “farmer,” died, according to the story “while swallowing hot porridge,” he became king in truth. The gods raised him over others including the previous king (Chronicles of the Early Kings, A 31-36; see Parpola, 1983, p. xxvi). By the will of the gods, a man sentenced to die in the king’s place became the representative and beloved of the gods, their regent: the king. Perhaps, this example and its given explanation show most clearly how their protoscience fails to meet scientific requirements: the hypothesis was not falsifiable. Instead, their mythology stepped in and provided an easy answer. Enlil-bani was “the exception that proved the rule.”

Examining these examples of omens in ancient Mesopotamia, the protoscience behind them is clear. Even more so, however, is that while the Mesopotamian scholars applied critical thinking and careful attention to detail in their collecting and recording of data, their mythological understanding of the world governed how they interpreted and used this data.

The Primeval History in the Hebrew Bible

In the context of the United States of America, the conflict between the primeval history of Genesis 1-11 and science has become part of a heated “cultural war.” For some, these biblical narratives represent an accurate description of the origins of the universe, an understanding that leads to a rejection of scientific theories. While others use the scientific to renounce the Bible and deny it any value. In this portion, I do not intend to belittle either viewpoint, but to present a different way of understanding the relationship between these narratives and science. These biblical narratives, like the ancient Near Eastern omens discussed above exist at the intersection of observation and mythology; as such, they do not represent scientific theories and should not be read as such today. Instead, they represent protoscience.

Like much of the Hebrew Bible, the text of Genesis 1:1-2:3 is connected to traditions in the larger ancient Near East. The authors built upon the existing body of knowledge and, as Andreas Schüle puts it, take “a constructive approach to the ancient Near Eastern elements” and by doing so they “connect with the state of knowledge in the ancient world” (Schüle, 2017, p. 267). Like the ancient Near Eastern myths and omens, the narrative of Genesis 1:1-2:3 interprets observations of the natural world through the lens of their own understanding of the divine. While the *Enuma Elish* tells of the firmament and the surface of the earth being made from the remains of the slain Tiamat, mother of the gods and a representation of the chaotic and primordial waters, the God of the Hebrew Bible creates the firmament and surface of the earth in the midst of the chaos waters to separate those waters (Gen 1:6-7). In both stories, the world is not created *ex nihilo*, from nothing, but from materials already present: whether the body of a divine being or in the midst of the chaos waters.

Both the *Enuma Elish* and Genesis creation stories also describe the foundations of the firmament and the land as holding back the waters of chaos. This theme is again present in the flood narrative of Genesis 6-9 and the Mesopotamian tale of Utnapishtim found in the Epic of Gilgamesh. Water was and remains an important key for life. The peoples of the ancient Near East, including the Levant, sought to control water through irrigation, terrace farming, and cisterns, allowing them to turn otherwise inhospitable land into arable land able to support crops and, thus, settlements. As necessary and life-giving as water is, however, it can also be destructive. A flood can destroy, seeming to erase everything from the surface of the earth, and a drought brings devastation and famine. It is not difficult to see why flood stories would have such popular appeal in various mythologies. The divine power over water, or over the boundaries that hold it back, exceed humanity’s seemingly feeble attempts to control it.

In Genesis 9:8-17, at the end of the flood narrative, God makes a covenant with Noah and with all the living beings with him to never again destroy the earth by flood. Though the ancients may not have understood the mechanics of a light passing through a water droplet and producing a rainbow, they would have observed rainbows in connection with rain. Here the observation of the phenomenon and its connection to rain along with the mythological aspect results in a sign of hope and comfort. No matter how bad the storm, the whole earth, the protoscientific narrative assures, will not be destroyed.

Within the primeval narratives, observation is not always limited by the understanding of the divine. Rather, observation may also play a role in constraining the divine. In Genesis 1:29-30, God gives the plants for food to the humans and to all the animals. As Schüle observes, there was no food chain in the created order of Genesis 1 (Schüle, 2017, p. 269). Yet many animals do rely on the death of other animals for their continued existence as obligate carnivores, and though humans may exist on a vegetarian diet, meat is commonly a part of human diets, even when infrequent. The divine plan does not work

within the observable reality, and so the protoscience must explain this disparity.

In Genesis 6:11-12, the violence that prompts God to destroy the world is not just the violence of humans but of “all flesh.” The intended design for all animals to be vegetarian had already failed, and for this reason God decides to scrap the whole project and start over. After the flood, God seems to have accepted that meat-eating is a reality and “gives” all the animals to humans just as God gave the plants in Genesis 1. The acceptance that there are also carnivorous and omnivorous animals goes unsaid, but the implication is that it is now only after the flood, in this round of re-creation, that God is willing to accept the food chain. Thus, the will of God seems to conform to reality rather than reality to the divine plan.

Despite the controversies found in parts of the world today, the choice between science and Bible is a false one. The Bible does not stand in opposition to the scientific theories of evolution or the big bang. Nor should the biblical exegete attempt to harmonize the narratives of Genesis 1-11 with modern science. These narratives contain a proto-scientific approach to the world that are centered in the mythos of authors. They may not be fact, but they can still be true.

Thus, the role of the biblical exegete is not to defend the Bible against the evidence of science. Nor is it to simply dismiss the biblical myths as mere metaphors. Instead, biblical scholarship should seek to understand the mythical behind the text just as we do with the historical.

Conclusion

Ancient myths are not a starting point for modern scientific endeavors. They do not offer insight into the formation of the cosmos or even the development of planet earth. Nor are there keys for understanding the process of evolution. They do not function as an alternative theory that can maintain predictions that lead to further discoveries. Most importantly, they cannot be falsified, and modification is merely a modification in interpretation.

Yet despite that, they provide a glimpse into the protoscientific thinking of the ancients. Though I have only discussed examples from one portion of the ancient world, an examination of other myths would likely show the same tendencies. Though these myths may start with a conclusion and work backward, they do not stand without a strong foundation in observation. We do not have to take these works as correct in their explanations for the world to respect the protoscience and rigorous intellectual curiosity that lie behind them.

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