

Babylonian and Greek Cosmology

From black holes, to the theory of everything, present day scientists such as Stephen Hawking are continually trying to find answers behind how the universe and humanity came about. In the west, the science of cosmology has gone through many transformations throughout the course of history, tracing back to the ancient Greeks of the period 423-323 BC. Although western cosmology is what we have come to know, during the ancient times, creation stories from many other cultures were created and passed down from generation to generation. These cultures provided their own theories of the origins of the universe. One culture in particular, Babylonia, had a cosmology with many comparable features to ancient Greek cosmology as well as unique qualities. The Babylonians (1792-1595 B.C.) and the Ancient Greeks both viewed the sky and stars as incredibly important and used them to help shape their culture, religion, their idea of the cosmological structure of the universe.

In the *Enuma Elish* the following is written,

“He (Marduk) constructed stations for the great gods,

Fixing their astral likenesses as constellations

He determined the year by designating the zones:

He set up three constellations for each of the twelve months

After defining the days of the year (by means) of (heavenly figures),

He founded the station of Nebiru to determine their Heavenly bands...”

This quote is important because it not only shows the significance of the stars in Babylonian mythology, but also shows how they incorporate it into their culture and daily lives through celestial timekeeping. In the *Enuma Elish* it is said that Marduk, the Babylonians main god, charged humanity with carrying out the will of the gods which would be communicated

with them through the stars and that Marduk created the calendar (Enuma Elish). The calendar and method of time keeping that Marduk is said to have created consisted of 19 solar years, broken into 12 or 13 lunar months, and 235 lunar years which would match every 6940 days. This type of time keeping also created a 7-day week and 24-hour day (Penprase pg. 136). The Babylonians had this type of time keeping system since the beginning of their civilization which is shown because they incorporated it into their creation story, which is demonstrated in the earlier quote. The Greeks, on the other hand, developed a calendar that was not only based on astronomical events but also on aspects of life such as planting and ceremonies that paid homage to the gods (Penprase pg. 149). Although the Greek calendar was used to plan worship of the gods, they did not incorporate months and years into their creation story in the way the Babylonians did. The Babylonians incorporation of their calendar into their creation story is a unique quality that separates them from the Greeks.

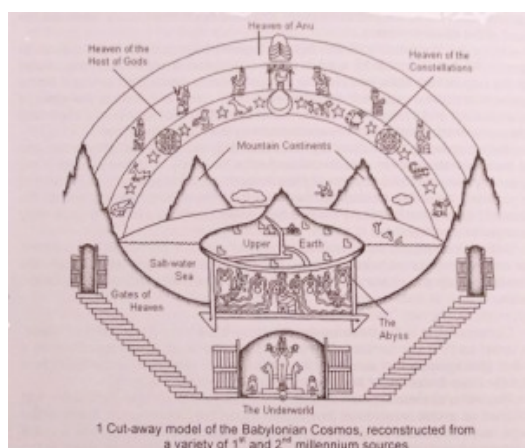
The stars are also important to both of these cultures because they influence not only their religion and faith, but also their culture and daily life. The Babylonians belief that Marduk communicated the god's will with them through the stars lead to the creation of Hammurabi's code. Hammurabi's code "is the earliest-known example of a ruler proclaiming publicly to his people an entire body of laws, arranged in orderly groups, so that all men might read and know what was required of them" (Fordham). These laws lead to the development of a legal system in Babylon that would regulate how the citizens lived. They also believed that Marduk would inform them of coming disaster through the stars. They then began to look to the stars for warning of such disasters which led to their practices of sacrifices and rituals to appease the gods (Nosotro). They believed that solar and lunar eclipses were signs of imminent danger. For example if there was a lunar eclipse on the thirteenth it meant that the ruler of Babylon was in

danger, and the direction the wind was blowing would tell them which way the enemy was coming from (Lendering). These signs would often prove to be right which encouraged them to continue looking to the sky for information. The Greeks also believed that the appearance of certain stars and anomalies in the sky were messages from their gods. When the Taurus constellation and the star cluster around it means that the spring showers are coming (Guillemette). These cultures both used the stars to find messages about what time of year it was and what their gods wanted them to do.

The Babylonian Genesis, by Alexander Heidel, presents the creation story that is central to Babylonian beliefs. Babylonians believe that the universe began in a formless state. There were two gods, Apsu, and Tiamat, who pre-existed the creation of the universe. These two gods were associated with bodies of water. Apsu represented the “sweet water” and Tiamat represented the salt water. They most likely associated these gods with water because of the Tigris and Euphrates rivers which surrounded the Babylonian empire. These two rivers met to form brackish water. From these two gods, the mixing of their water, the rest of the gods, such as Ea, Anu, and Marduk, come into existence. Apsu and Tiamat plan to kill the other gods and Ea destroys Apsu, taking power for himself. Tiamat gives birth to monsters that Ea and Anu are incapable of defeating, and Marduk offers to kill them but only if he can become the head god. Marduk kills Tiamat and then uses her body to create the universe. Marduk creates his own temple in the sky and gave each of the greatest gods a post on constellations such as the “stars of Any, Ea, and Enlil” or planets like Venus which was associated with Ishtar (North pg. 43-45). From two of Tiamat’s ribs he creates east and west, and from her liver he makes the North Star. He uses her spit to form clouds, rain, and fog. He then turns her head into a mountain and pierces her eyes for the beginning of the Tigris and Euphrates rivers. He uses her tail to fashion

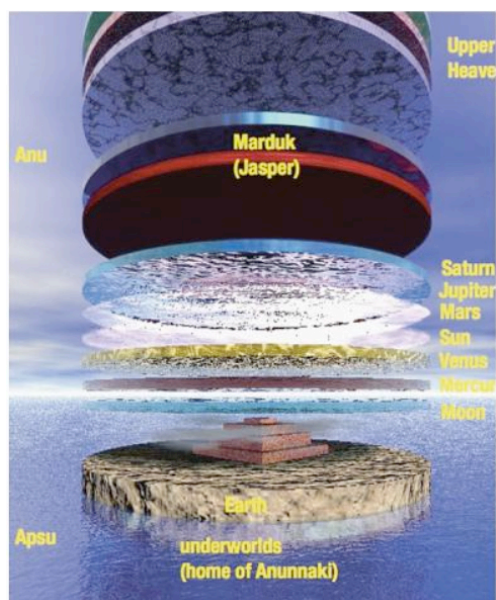
the Milky Way and her crotch to hold up the sky. Marduk decides to name the center of the world Babylon, which means “gate of god”. In the end of the story, Marduk begins to regulate the moon, sun, and weather, creates the calendar, organizes the stars and planets, and then decides to create humanity and from Ea’s suggestion they take the blood of the leader of the rebel gods, Kingu, to do so (Enuma Elish).

The Babylonian creation story greatly resembles that of the Greeks. The Greeks based their mythology of off constellations that they saw in the sky and would create stories to match



these constellations (Guillemette). The Greeks similarly thought that the universe was in a shapeless state and that there were two preexisting gods. However, these gods were not water based gods but instead were sky, Uranus, and earth, Gaia. These gods then gave birth to the rest of the gods. Cronos kills his father, Uranus, and is later killed by his son, Zeus (Penprase pg. 80). After

killing his father, Zeus tasked Prometheus with creating humanity. The stories differ because the Greeks gods do not create the features of the universe, as well as the fact that humanity was not made by the head god in Greek mythology.



The importance of the stars and the creation stories that the Babylonians and Greeks believe in heavily influenced their view of the structure of the universe. The Babylonians had a more intricate and complex way of viewing the construction of the universe

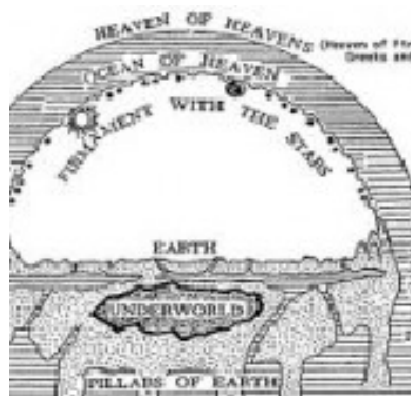


Figure 3: The Greek structure of the universe

then the Greeks. They believed that the universe was dome shaped (see figure 1), divided into at least six layers (as shown in figure 2), and “would therefore include at least three sky layers, a layer for earth and at least two underworlds (the Apsu and the home of the Anunnaki)” (Penprase 104). The sky layers consisted of three sections: “the realm of the wind, the chambers of rain clouds, and the heavenly bodies, sun, moon, and stars” (januarius). There

were layers inhabited by the gods Marduk, Anu, and the Sky gods called Igigi, as well as a layer for celestial bodies. Underneath the layers of Heaven lies the layer of Earth. Earth is where humanity resides and could look to the sky to see what the gods wanted them to do. Below Earth are the layers of Apsu and the underworld. The Babylonians thought that Apsu was the fresh water sea that surrounded and supported Earth. Underneath this layer was the underworld layer where six hundred gods resided, and it was the place where the souls of the deceased were sent.

The Greek cosmological model differs from that of the Babylonians in aspects such as the number of layers and where the gods reside. The Greeks believed that the universe is composed of only three layers (see figure 3), heavens, earth, and the underworld, as opposed to the hundreds of layers in the Babylonian structure (Penprase). This difference is most likely due to the Babylonians believing that each God inhabited a certain star and they were able to see that some were farther away than others because of how often they appeared which would allow them to create a multilayer structured universe. The main similarities that these two models share is that Earth is surrounded by the “waters of chaos” and there is an underworld beneath the Earth layer. The Greeks believed that the gods inhabited the peak of Mt. Olympus, which they saw as

in the sky, where they watched over society, keeping everything in order. They also believed that the sky acts as a dome that extends infinitely across the earth and is pigmented blue because of the heavenly ocean below. This concept shows that the Greeks considered there to be only one heaven as opposed to the many heavens of the Babylonian structure. This is most likely due to their belief that their gods all coexisted on Mt. Olympus whereas the Babylonians believed that Marduk had created posts at different points in the universe for each of the gods (Penprase). Another major difference between the Babylonians and the Greeks is their beliefs about the underworld. The Babylonians believe that six hundred gods inhabit the underworld whereas in Greek mythology there is only one god, Hades, who resides in the underworld (Penprase). This difference is most likely because in the Babylonians creation story there is an uprising of the Gods and those that participated were sent to inhabit the universe, but in the Greek mythology Hades is tricked into inhabiting the underworld. They also have unlike ideas of who gets the privilege to go to heaven or gets sent to hell differs. In Greek religion, it is the ones who have been wicked during their lifetime who are sent to the underworld while the good are rewarded with the entrance to heaven. This idea differs from the Babylonian view in where the heavens are reserved for the gods and all of humanity is sent to the underworld. Heaven, according to the Babylonians, is a sacred place for just the great gods to reside where they created a separate layer for humanity to thrive on their own (Penprase).

The Babylonians and Greeks share many fundamental beliefs and practices which were all influenced by their interpretation of the stars and the overall importance they believed the sky to have. Both civilizations developed methods of keeping time based on what they saw in the sky. These methods of keeping time influenced their mythology and religious practices. They both believed that the universe was first created from a formless state that was shaped and

transformed by the gods. They also had similar ideas as to the structure of the universe and the creation of humanity. The Babylonian and Greek observations of the sky allowed them to discover and develop ideas about the universe as well as when they should plant crops. These discoveries and practices allowed them to both become powerful empires because of the knowledge that they both had. Looking at these two empires it is clear that the power that they were able to obtain came from their observation of the sky.

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