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Articles

Ancient civilizations' territorial borders analyzed through their cosmogonies

Las fronteras territoriales de las antiguas civilizaciones analizadas a través de sus cosmogonías

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Abstract

This paper compares the ancient Mediterranean and Mesopotamian civilizations' concept of borders and their relation with the spaces they transformed through a comparative approach of selected ancient civilizations, putting these cosmogonies into a chronological evolutionary line. The distinct motifs, symbols, and theological frameworks are examined through secondary sources. While each of these civilizations counts with individual studies, few serious attempts have been made to address these four civilizations together. The discussion aims to set the premises of the importance of borders in contemporary urban and territorial studies when religion often has a secondary role. While they were critical elements in the definition of territorial limits in the past, their inheritance is still present in our contemporary concept of borders as producers of fears.

Keywords: cosmogony, history of civilizations, history of religions, cartography, borders, fear.

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Resumen

Este artículo compara el concepto que las antiguas civilizaciones mediterráneas y mesopotámicas tenían de las fronteras y su relación con los espacios que transformaban mediante un enfoque comparativo sobre algunas civilizaciones seleccionadas, situando estas cosmogonías en una línea evolutiva cronológica. El examen de los distintos motivos, símbolos y marcos teológicos se realiza a través de fuentes secundarias. Aunque cada una de estas civilizaciones cuenta con estudios individuales, se han hecho pocos intentos rigurosos de abordar estas cuatro civilizaciones de forma conjunta. La discusión pretende sentar las premisas de la

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importancia de las fronteras en los estudios urbanos y territoriales contemporáneos, cuando la religión tiene a menudo un papel secundario. Si en el pasado fueron elementos críticos en la definición de los límites territoriales, su herencia sigue presente en nuestra concepción contemporánea de las fronteras como productoras de miedos.

Palabras clave: cosmogonía, historia de las civilizaciones, historia de las religiones, cartografía, fronteras, miedo.

Introduction

The concept of the creation of the world was assimilated by ancient cultures as the creation of the cosmos (from the Greek κόσμος, meaning "the ordered universe") out of absolute nothingness. Only deities were believed to possess the power to transform primitive chaos into the common world experienced by humans. Understanding ancient cosmogonies[1] is considered the basis for the main explanation of the world's genesis in ancient cultures.

Cosmogonies must be understood as a human construct related to their historical and geographical context, developed for understanding the order and structure of the universe through the connection between divine beings and natural phenomena. It is an abstract concept, in many cases, complex to understand without a broader comprehension of the cultures involved. Although ancient civilizations' descriptions of the universe—which are intended to mean the experienced and unknown world—were often figurative, it cannot be assumed that they were literal beliefs. In some cases, the use of metaphor could have helped to explain reality and consolidate rulers' domination over their subjects, such as in the case of descriptions of heaven (Russell, 2006, p. 2).

Following the idea of metaphors, "before" time and "outside" space are very relevant concepts frequently used by ancient civilizations to describe the ecumene (the known world). The analysis of literary sources, maps as representations of the beliefs and empirical observations of ancient civilizations and iconographic and archaeological sources can help understand how they occupied borderlands and perceived religious beliefs and reality directly linked to heaven and the underworld with those very religious beliefs. This is particularly relevant at a time when eventually there was no consistent representation of the territory they occupied (Farinelli, 2018).

Cosmogonies may show us how a civilization perceived the borderlands between their territory and that of their neighbors. They may reveal important information about how they viewed these areas as spaces of potential conflict or exchange, and how they navigated them or crossed the borders to access the realm of the "other side". Every building or defensive system created by humans is both a "model of" and a

[1] Cosmogony, from the Greek κοσμογονία, means "world creation", encompassing both mythical narratives and rational theories about the origin and development of the cosmos. While ancient cosmogonic myths seek to render the world's origin comprehensible and imbue it with meaning, scientific cosmogonic theories, like the Big Bang, aim to provide rational frameworks for understanding cosmic origins. However, the distinction between myth and science in cosmogony is fluid, with scientific theories potentially being reevaluated as myths due to inherent limitations and unanswered questions. For instance, the Big Bang theory, despite its scientific underpinnings, may be regarded as a myth in the future. It insists that "the universe is expanding!" without addressing the fundamental question: "expanding in what?".

"model for" the cosmos as a whole (Geertz, 1972; Rennie, 2009). Translating this same idea to borders should let us understand their continued influence today, based on how past civilizations dealt with borders in their political and religious discourses.

Primitive models, cartography and maps in general, are not just tools for spatial understanding but also represent qualitative concepts and events in the human world (Dorling, 1998). Cosmogonies were often included in descriptions of the known world, providing insight into the beliefs of past societies through these artifacts. These representations often distinguish between the sacred and profane realms, as well as the planned and organized world versus the outer profane, chaotic and unknown space.

The story of Gog and Magog provides a glimpse into the origins of xenophobia and border policies, as it portrays the border as a physical wall (Brandes, 2016; Doufikar-Aerts, 2020). Over time, the story of Gog and Magog has been used by some to justify xenophobic and isolationist policies, with borders being seen as a necessary means of keeping the "good" insiders safe from the "bad" outsiders. This understanding differs from the view that emerged in the late 19th century, when "religion became synonymous with superstition and science became the only legitimate source of truth" (Russell, 1997, p. x).

However, the Mog and Magog ideology that transforms the border from a simple line into a physical wall is still prevalent in some contemporary political discourses. This transformation represents a psychological defense mechanism, where the wall becomes both a real and a symbolic representation of protection against perceived external threats, such as terrorism and crime. This is already evident in the civilizations studied, where only the hero was able to cross the known borders of the ecumene, where he fought with unknown monsters in a process to create new myths (Prados et al., 2012, pp. 23-47).

The present paper focuses on the concept of borders and how ancient civilizations understood, described and cohabited with them. After a section about the methodology applied, the concept of borders and how ancient civilizations understood, described and cohabited with them is presented for ancient Mediterranean civilizations (Mesopotamian, specifically the Sumerians, Amorites and Chaldeans, Egyptians, Greeks and Romans). The examination of how these civilizations justified theoretical concepts related to the material world is later developed in the discussion and conclusions section to inform current geographical theories, especially as the field is experiencing a resurgence of border conflicts related to contemporary migrations and conflicts. (Anteby-Yemini et al., 2014; Blake, 1998; Cimadomo, 2023). The transition from two-dimensional to three-dimensional models which is highlighted during this research also offers an opportunity to expand the idea of the development of open borders, extending the domains of a single civilization to the whole known world.

Analyzing how ancient civilizations dealt with these issues can help us understand their ongoing impact and, in some cases, contribute to their resolution.

The purpose of this examination is to compare the origin of the concept of borders in ancient civilizations with the physical spaces in which they settled. By doing so, we can gain a deeper understanding of the geographical limits of these societies. This type of analysis is relevant to contemporary discourse on borders because many of our beliefs are rooted in ancient ideas that have been transformed and adapted to fit our present circumstances. However, it is concerning that these ancient concepts are sometimes adopted without critical examination, resulting in fears that are still present today and are often perpetuated by the political establishment, which is now

more closely tied to economic rather than religious power (Cimadomo, 2017; Van Houtum & Strüver, 2002). However, today there still exist borders based on religious discrimination, which are the origin of relevant conflicts, like in the case of the Israeli-Palestinian and Pakistani-Indian borders.

In recent decades, the study of ancient maps has gained increasing interest from researchers, covering all the great civilizations of the past (Brotton, 2012; Farinelli, 2007; Harley & Woodward, 1987). Specific applications in the understanding of the universe have been developed from disciplines like biology and geoscience (Gargaud et al., 2011), theology and philosophy (Scafi, 2006) and political subjective constructions (Brotton, 2012). The role of maps in showing the power of an omnipotent deity, also known as the art of persuasion of religious cartography, is presented in Tuzzeo's exposition at Stanford's David Rumsey Map Center (Tuzzeo, 2017).

The word "realm" (derived from the Latin word *regalimen* or *regalis* which means "royal") originally refers to a kingdom. Over time, the meaning of the word evolved to encompass a broader range of ideas such as a sphere of activity, a domain of knowledge or expertise, or a particular state of being or experience. Although the etymology of this word does not directly relate to the concept of borders, it can be argued that the concept of a realm is closely linked to the idea of boundaries and borders. A realm can be seen as a specific space or territory that is defined by certain boundaries or borders. In this sense, a realm can be seen as a space that is separate from other spaces, and which has its distinct qualities, characteristics and rules. A realm is typically ruled by a monarch or other authority figure who exercises a significant degree of control over the space and the people within it. In this sense, the concept of a realm is closely tied to the idea of sovereignty and the power to define and enforce borders and boundaries.

The conflation of the realm with power and ruling can be seen as a loop back to the concept of fear, which is inherent in the idea of territory. Critical theorist Homi Bhabha writes: "Etymologically unsettled, 'territory' derives from both terra (earth) and terrēre (to frighten) whence territorium, 'a place from which people are frightened off'" (Bhabha, 1985, p. 78). The concepts of terror, religion, politics and death are complex and multifaceted, and they are often linked in various ways (Cimadomo, 2015). It is logical to think of world descriptions as a flat representation of this complex spatial interplay between these condensed issues. In ancient civilizations, the realm of the sacred was already linked to fear and punishment, and this connection has persisted throughout history. While exploring each aspect of this amalgamation is beyond the scope of this article, there are numerous examples in which one realm intertwines with the others.

Also, if the term "sacred terror" or "holy terror" is new and was partly coined by philosopher Paul Virilio (Diken & Bagge Laustsen, 2018), the link between the sacred and terror has existed since the dawn of civilizations. Terror is the main stuff of every map, as Francis Bacon has correctly put it: *Dolendi modus, timendi non item* (Pain has a limit; fear has none) (Stone, 2005, p. 28). Terror is formless (Virilio & Lotringer, 2008, p. 173), but it is also the creator and shaper of the forms. Every line or wall divides the land into two territories: two different territories of terror. By reducing the omnipresent labyrinthic globe of "terror" into a bordered map, we can better explain the multiple possible "territories" between the expressed and repressed, profane and sacred, Good and evil, we and they, life and death.

In terms of the etymology of the word *explain*, it comes from the Latin word *explanare*, which means "to make plain or clear". The word *explanare* is made up of two parts:

ex, meaning "out" and *planare*, meaning "to make level". Any line divides the surface between two sides and simultaneously, explains the realm of being. Virilio already mentioned that "Whoever controls the territory possesses it. Possession of territory is not primarily about laws and contracts, but first and foremost a matter of movement and circulation" (Armitage & Virilio, 2000).

Borders today have different meanings according to the field they are looked from, and have to be understood from the point of social entropy. Social entropy, in its essence, is the measure of disorder or uncertainty within a social system. It reflects the tendency of social structures to change over time, either towards increased disorder or towards more ordered states. For instance, globalization considers borders as elements that have to be crossed by goods as fast as possible, in their displacement between their places of production and consumption, remaining unaware of the territory they cross (Castells, 1996; Cidell & Prytherch, 2015). Migratory flows can be understood similarly, but often generate turbulences and new territorial configurations due to countries' efforts to limit new entrances (Cimadomo & Martínez Ponce, 2006).

Religious boundaries, often intertwined with political ones, are erected in an attempt to maintain or conquer supremacy or (moral) leadership over the "other" who necessarily takes on a role of risk to the well-being of the population on this side. In the past, borders worked and were intended differently, also if a direct relation exists with contemporary ones. Ancient civilizations' myths and creation stories often depict islands of order within an ocean of chaos. In these narratives, the island represents a bounded space of order, stability and coherence, while the surrounding chaos symbolizes the unbounded and unpredictable forces of disorder and change.

The limits of the ecumene in antiquity tend to be permanently modified by the ability to explore and occupy previously unknown territories, transforming fears and dangers into something possible to dominate and control. The limits are displaced, transformed into something unreachable, until the cartography reaches a level of precision that allows it to reflect the reality of our world (Prados et al., 2012, pp. 19-22). At the same time, borders are extremely relevant for ancient civilizations as contact areas, under a zonal concept that fosters new social forms, through economic, cultural and economic interchanges (Prados et al., 2012, pp. 9-17). They provide a framework for understanding the complexities of human existence and offer insights into the enduring quest for order amidst the ever-present forces of chaos and foreign forces.

In German, the word *Jenseits* reflects this relation between the other side and the supernatural. Other etymological instances strengthen this argument. For example, in Latin, the word *trans,* similar to Akkadian aḫūla, ebertān or elat, means "across" or "beyond" and it is the root of words like "transcendence" and "transcendent", which connote a sense of going beyond the ordinary or material world into the realm of the divine or mystical. The idea of heaven and hell in ancient civilizations can be attributed to a sort of worldview, which often included a belief in a supernatural realm that was connected to the physical world. In many cases, these realms were believed to be located beyond the borders of the known world, and the border served as a point of transition between the physical and supernatural realms. These ideas remain present in today's geographical borders, often hidden under unconscious beliefs. Explicating them can improve the contemporary design of borders and unknown/known elements that exist at any scale.

Research methodology

From a critical perspective, it is important to note that while ancient cosmogonies can provide insights into the beliefs and values of ancient civilizations, they should be analyzed carefully and with caution. For example, the interpretation of ancient texts and artifacts can be influenced by biases and preconceptions of the modern scholars who study them. Additionally, it is difficult to draw clear conclusions about ancient cosmogonies since they varied greatly across cultures and periods. Therefore, any analysis of ancient cosmogonies should be based on a careful consideration of the historical, cultural and linguistic contexts in which they were produced.

Analyzing ancient cosmogonies is a challenging task, as it requires us to comprehend the episteme of ancient civilizations, which can be considered impossible to fully understand. However, as Jorge Luis Borges' short story Tlön, Uqbar, Orbis Tertius illustrates (Borges, 1940), we can still glean valuable insights from parallel alien civilizations as well as those of the past by adopting a more imaginative and creative approach to scholarship. In this story, Borges describes a fictional world called Tlön, which is created by a secret society of intellectuals who wish to construct a completely ideal world. This society believes that the world is a mere human construct and that they can change it by altering language and perception. In Tlön, there is no distinction between fact and fiction, and everything is seen as a product of human invention.

While this may seem like an unorthodox methodology to some, it highlights the importance and agency of imagination in gaining a deeper understanding of the past. By acknowledging that our understanding of the past is always mediated through our own cultural and historical context, we can adopt a more flexible and meanwhile critical approach to interpreting ancient cosmogonies. In this way, the Tlön, Uqbar, Orbis Tertius perspective can help us to approach ancient cosmogonies more holistically and imaginatively, allowing us to call upon the spirit of the past and gain a deeper understanding of the beliefs and values of ancient civilizations in some point between pure positivism and "Anything goes!" (Feyerabend, 1975, 1976, 1987).

Ersatz-Ansatz is a German term that can be translated to "substitute approach" or "replacement method" in English. The Ersatz-Ansatz is a mathematical methodology that involves proposing a random or seemingly absurd hypothesis in the face of an unsolvable problem. While this approach initially yields incorrect results, it can alter the way we approach the problem and lead to a new understanding. By introducing an unexpected element, the problem is redefined and the resulting error data can provide valuable insight. With each iteration, the problem is reshaped and a clearer outline of a solution may begin to emerge. The Ersatz-Ansatz allows for a creative approach to problem-solving and can lead to breakthroughs in even the most challenging of situations.

Working with ancient civilizations requires a certain level of creativity and imagination, as we are often faced with incomplete or fragmented information. In a way, we are always using the Ersatz-Ansatz method because what we really know about these civilizations is often limited, and we must fill in the gaps with our hypotheses and interpretations. As Borges' story Tlön, Uqbar, Orbis Tertius illustrates, even the smallest details of a civilization can have a profound impact on our understanding of it. These small objects have the power to reshape our perception of reality. Similarly, the little

information we have about ancient civilizations when compared and complemented with other civilizations', may be a substitute (Ersatz) for what really happened.

It should be also acknowledged that this study is limited and partial, as it is based on secondary sources that have been studied and described by archaeologists and historians since the end of the 19th century. The value of this work lies in its comparative approach, putting these cosmogonies into a chronological evolutionary line, suggesting how changes were performed through the continuity of previous beliefs, expanded and adapted after new geographical and scientific discoveries. While it should be noted that the study's scope is limited to the Mediterranean and Mesopotamian regions, they were home to civilizations that had a profound impact on the development of Western thought and religious traditions.

Understanding the cosmogonies of these cultures helps shed light on the origins of influential belief systems, providing a foundation for understanding subsequent cultural and intellectual developments, as contemporary geographical and political balances. The Mediterranean and Mesopotamian regions served as crossroads of trade, communication and cultural exchange. Ancient civilizations in these regions interacted, influenced one another and shared cosmogonist ideas. For example, the ancient Greeks were influenced by Egyptian and Mesopotamian cosmogonic concepts, resulting in syncretic interpretations and mythological parallels. By focusing on these regions, within a defined context, a more nuanced analysis of cultural, historical and religious factors is expected. The examination of the distinct motifs, symbols and theological frameworks present in these cosmogonies should lead to a deeper understanding of their unique characteristics and impact on modern border theories.

By studying ancient cosmogonies, we can gain a deeper understanding of how borders shape and organize space. Unlike the typical view of the universe as expanding outward from a central capital city through military conquest, cosmogonies offer a more inward-focused approach where the outer limits play a key role in the organization of the earth. Additionally, the kinds of borders envisioned by different civilizations can also provide valuable insights. While peaceful societies often saw borders as abrupt transitions between the known world and the unknown void beyond, more aggressive civilizations imagined borders as defensive walls that marked the end of their known world. These findings highlight the importance of understanding how ancient beliefs and concepts continue to influence contemporary discourse on borders and the need for critical reflection on the origins and implications of these ideas.

Mesopotamian cultures, a radial understanding of the universe (3500-555 B.C.E.)

The Fertile Crescent, particularly the valley between the Tigris and Euphrates rivers, has been identified as the birthplace of the "Urban Revolution" and hosted some of the most significant civilizations from around 3500 B.C.E. Although it is a large and diverse region, both geographically and in terms of the populations that have inhabited it, Mesopotamia (meaning "between two rivers" in Greek) is an interesting case study due to the importance that these rivers and the region's geography hold for its inhabitants. It is also the origin of humanity's first cosmogony and cosmology (Kramer, 1956, p. 75).

Different cultural communities adapted to the vastly different geographic conditions, creating a network based on coexistence (not always respected) and interaction between various groups, as historian Mario Liverani notes: "Borders are a concept rather than a feature of the environment. A border zone is located along the boundaries of a given community, beyond which there is nothing, or the generally inferior 'other'. A border is univocal, being a point of view or better, an idea" (Liverani, 2013, p. 18).

Additionally, while the many civilizations that settled in the region shared some characteristics such as their script and gods, there were significant differences in their concepts of land and borders, which will be analyzed hereafter.

Sumerians

The Sumerian culture, which inhabited the southern area of the region from 3500-2000 B.C.E., is significant for its urban advancements as well as its cosmological beliefs. Sumerian sages and philosophers viewed the physical world as a manifestation of the divine realm, although they used their surroundings and experiences as the foundation for their cosmogony. The number of documents about this era, which spans over 2 500 years, offers a vision of the Sumerian view of the universe consistent but at the same time discordant (Horowitz, 1998). It evolved according to the development of new astronomical discoveries and geographical understanding, making difficult a clear picture of their cosmic vision.

According to their belief, the original sea, represented by the goddess Nammu, produced a cosmic mountain that simultaneously formed the heavens and the earth. The two deities, An (sky) and Ki (earth) gave birth to the god of the atmosphere, Enlil, who acted as a mediator and separated the earth from the heavens. These four main gods were the most essential elements of the cosmos (heaven, earth, sea and atmosphere) and facilitated the creation of humans, animals and all other things. The existence of predetermined plans created by the deities to establish permanent rules and regulations, or the lack of interest in questioning every single aspect of the cosmos, resolved several issues with more complex rhetorical questions.

The evidence of reality helped to build this cosmogony: gods were manlike, but also needed to be immortals, applying the doctrine of the creative power, according to which these gods had only to lay their plains and pronounce the name (Kramer, 1956, p. 77). The structure of human society was replicated in the pantheon of gods, and the same is true for their image of the universe. Sumerian philosophers gave for indisputable fact the existence of a boundless sea, a primeval sea fixed and immovable, which surrounded the mountain (heaven and earth). A description of their world would be as follows:

> Cosmos was divided into different layers, one of which was the terrestrial world resting over the underworld, and covered by the celestial vault. It was represented like an island surrounded by water and the mountains of the "end of the world". (Crescentino, 2001)

There is a relationship between the cosmogony of alternating chaos and order at the hands of the gods and the imperial power that brings order to previous chaos. The gods are responsible for natural events—rain and floods—and thus for the well-being

of the community. Hence the importance of linking the emperor with the gods, as a guarantor of the welfare of the community. Piotr Michalowski (2009), in his chapter "Masters of the Four Corners of the Heavens: Views of the Universe in Early Mesopotamian Writings" describes how early Mesopotamian writers viewed their neighbors and the world around them. Sumerians were a complex multicultural civilization, which during the Akkadian kingdom (ca. 2334-2150) "recognized no conceptual or topographical geographical boundaries; they extended their conquests to the ends of the earth that they knew" (Michalowski, 2009, p. 152). It was a radial geopolitical perception, with Akkad in the center, ruling over all directions, or "on the four corners of the universe".

The number four does indeed hold significant importance in Sumerian civilization. It is not enough to believe that the world is composed of four elements: earth, water, air and fire. These elements were also believed to be associated with the four directions: north, south, east and west. And perhaps in many other ways, such as their division of the year into four seasons, the division of the day into four parts and the division of space into four cardinal points. This is why the symbol for the Sumerian god Enlil, who was associated with wind and the air element, was represented by a cross with four arms. The number four, as a symbol of the body and living inside a fourfold, can be seen as a way of representing this fundamental relationship between human beings and the world around them. The fourfold not only symbolizes the body of a man or a god but also represents the idea of living within a fourfold, or a world structured around four cardinal points. This concept of living within a fourfold was integral to the Sumerian worldview and is reflected in their art, architecture and literature.

Amorites

From 2000 to 1600 B.C.E., the region was ruled by several dynasties of Amorite origin, which were made up of nomadic groups from northern Syria. They established the kingdom of Babylonia, and their pantheon of gods was directly derived from Sumerian culture, but with its own specificities that can be traced back to the geography of the region.

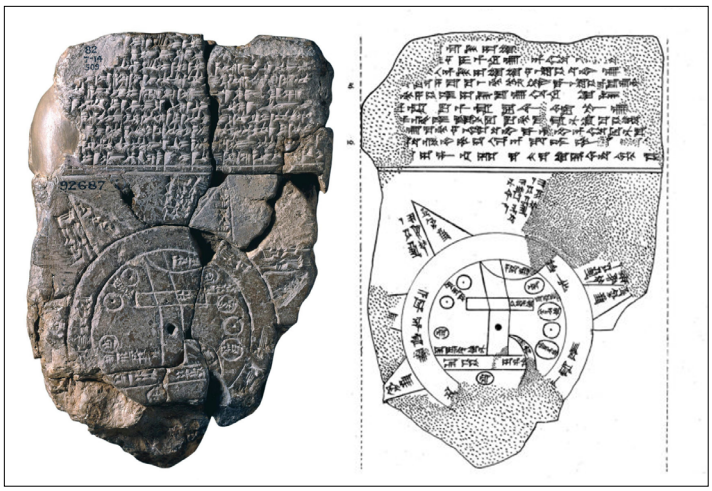
Over time, mud accumulated between the Tigris and Euphrates rivers, as well as near the Persian Gulf, gradually expanding the landmass towards the sea. This process created fertile soil that, after the rivers' regular spring floods were dammed to control potential damage, allowed the Amorites to increase their power through surplus crops and trade. These tangible experiences led to the waters of the sea and rivers being considered the origin of the divinities of mud, Lahmu and Lahamu, who then generated Anshar and Kishar, the divinities representing the sky and the earth limits, respectively, later divided by the wind.

The description that the priests gave of Babylon is believed to be similar to a bag filled with air, with Earth at the bottom and the sky as the roof. This bag was thought to be immersed in primitive water, which sometimes filtered into the interior of the bag, creating rivers and rainfalls. The Babylonian map of the world (700-500 B.C.E.), discovered by Hormzud Rassam in 1881, helps to better understand such a model (see

Figure 1). It depicts two concentric rings, with the outer circle representing the ocean or saltwater (Marratu), encircling the inhabited world represented by the Euphrates River, the city of Babylon in a dominant position, and other cities and regions of the country. Outside the outer circle, several triangles depict lesser-known faraway places with mythological and exotic animals, as described in the accompanying text.

Both the description given by priests and the Babylonian Map of the World are historically significant as they provide insight into the worldview of the ancient Babylonian civilization, where the concepts of heaven, earth and water were central to their religious beliefs and understanding of the world. The map also shows their knowledge of distant lands and animals, as well as their interest in mythological creatures.

Figure 1. Babylonian map of the world, ca. 6th century B.C.E., clay, findspot: Abu Habba (Sippar), Iraq, size: 12.2 cm x 8 cm approximately



Source: Trustees of the British Museum, public domain

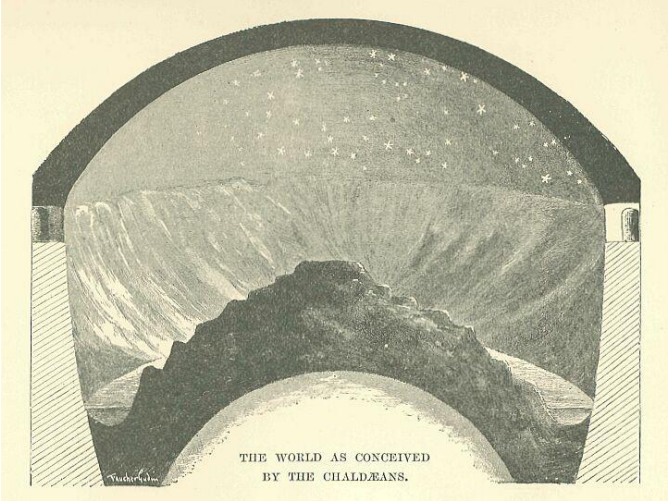
Created during a period when the Babylonian and Assyrian empires had reached their widest extensions, the Babylonian Map of the world is an example of imposing order and structure on the seemingly limitless expanse of the known world (Brotton, 2012). At the center of the map is Babylon, demonstrating a centralist attitude, a common feature in many subsequent maps up to the present, and in all cases studied in this paper. This approach made it possible to distinguish and reinforce a collective identity ordered by sacred deities in relation to an unknowable profane realm, creating a strong connection between the country and the God who created the world, and putting everything else in a secondary position.

Chaldeans

In southeastern Babylonia, stretching for hundreds of miles along the western shores of the Persian Gulf, the Chaldeans, possibly a tribe originating from the far east, found a suitable territory to settle in during the first millennium B.C.E. This land, also known as Sealand, was formed from deposits left by the periodic spring floods of the

two rivers. Although it is uncertain whether there was any form of internal organization and coordination among the Chaldeans, three major groups are recognized. At least one of these tribes is known to have led several rebellions and attacks against the Assyrian Empire during the 8th and 7th centuries B.C.E., which resulted in punitive actions by Assyrian kings. Only in 620 B.C.E., after centuries of revolts and the fall of the Assyrians, were the Chaldeans able to rule all of Mesopotamia, albeit for a short period. They controlled a significant number of walled cities, which can be attributed to the frequent sieges they faced in their battles against the Assyrians.

Figure 2. "The dawn of civilization: Egypt and Chaldea" (1897)



Source: Faucher-Gudin, published in Maspero, 1901, vol. 3. Public domain

This condition, together with previous civilizations' beliefs, configured the idea of the world developed by Chaldeans, slightly different from previous civilizations (see Figure 2). They saw the Earth as a flat element rising to the top of a mountain in the center, from where the rivers had their sources. A big wall fortified it with no openings, and waters filled the in-between. This mysterious ocean, the fortified wall and a metal dome shining during the day and appearing as a dark surface during the night, separated the domain of men from the regions reserved for the gods (Maspero, 1901, vol. 3). Navigation was forbidden in this ocean also known as the Water of the Death. The attempt to cross it without permission, authorized only on a few occasions by the divinities, had to be paid with a fall to the never-ending abyss (Moreno Corral, 1997). The wall had also the function of leaving everything outside without seeking and hence without a name, therefore it didn't exist. Everything hidden behind the wall, wouldn't be part of the real world.

Egypt, blurred adapting boundaries (3100-332 B.C.E.)

The Egyptian dynasties (which followed a predynastic and archaic period that started around 5000 B.C.E.) flourished in the Nile Valley between 2700 B.C.E. and 2200 B.C.E. The region was naturally delimited by deserts to the east and west, and by the

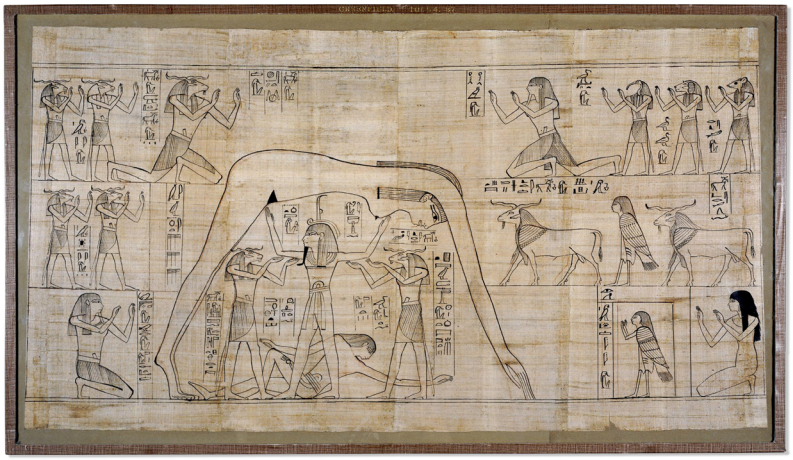
river delta to the north, creating strong geographical borders, although they did not precisely correspond to Egyptian political borders. The imperial borders were controlled through patrols and fortified elements, although neighboring civilizations did not exert much pressure on these territories. Little information about the Egyptians' defensive system in the desert and the Nile's affluent area has been discovered, which was a much more attractive target for nearby civilizations.

Espinel's research on the different terms used to refer to abstract and real borders helps to support the hypothesis that the Egyptians adapted their defensive system to their geographic reality, utilizing mobile patrols to cover the most fertile lands of the empire and defensive structures to protect strategic access points to the core of the empire (Espinel, 1998).

Due to the limited number of surviving maps and the long history of ancient Egypt, it is difficult to establish the role of the main dynasties in the evolution of cartography. However, despite the scarcity of cadastral maps and land surveys, a significant group of early drawings (circa 1400 B.C.E.) are related to the representation of mythical concepts, particularly the Netherworld and the landscape awaiting the deceased as described in the Book of the Two Ways and the Book of the Dead.

In ancient Egypt, there was an important separation between the imperial court and common citizens. On one side, there was a symbolic dimension based on religious and mythical beliefs, while on the other side, there was a practical dimension that was true to daily life. An interesting depiction of a world generated by the division of the earth and the sky is represented in the Princess Nesitanebtashru papyrus, dating back to circa 1000 B.C.E. (see Figure 3). It shows a generalized character representing the world, with the shapes of the divinities Nut (the Sky) and Shibu (the Earth) closely related to the extended territory of the Nile Valley (Moreno Corral, 1997). A similar image is represented on the cover of a stone sarcophagus from Saqqara (circa 350 B.C.E.), where Nut, in an arched position, covers or protects Geb, the earth god. On the shoulders of Geb, a circle represents the region of Egypt, and the exterior ring introduces its neighbors and several other gods (Harley & Woodward, 1987, pp. 117-129).

Figure 3. The burial of Nesitanebtashru papyrus: Shu supporting Nut, or the separation of Earth from Heaven by the god of the Air

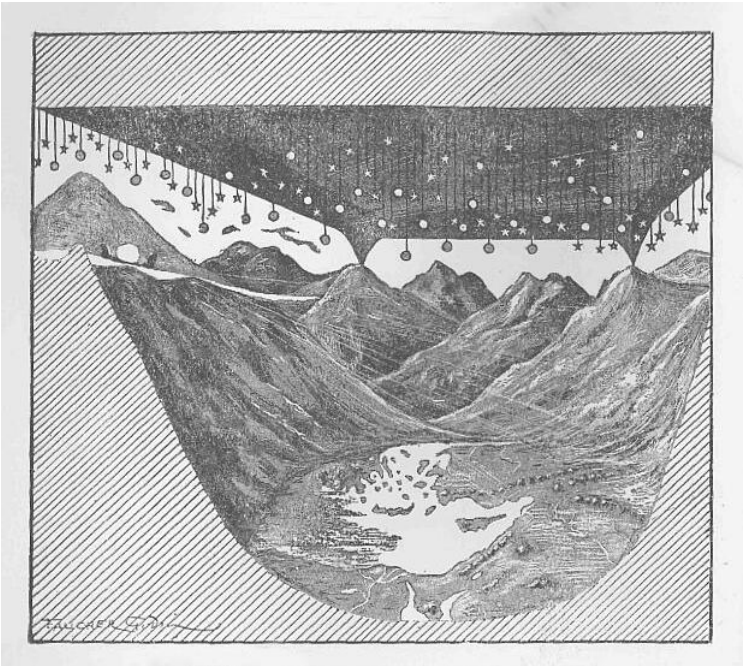


Source: British Museum. Public domain

Again, like in previous Mesopotamian cultures, great relevance is given to the space between earth and sky, in this case, represented by the human form of Shu, who also helps to support the symbolic circle. Later on, when figuration gave space to a geographic representation of the world, it was described as a rectangular box, oriented north-south like the Egyptian country, being south, from where the Nile flowed, the chief cardinal point. The plane of Earth was at the bottom, floating over the water. Egypt was in the middle of this box, already seen as an alternate succession of continents and seas. Covering the box there was the sky, another flat plane, laying over four mountains, located at the corners.

The evolution of this concept went parallel to astronomical observations, so the sky was soon modified into a convex surface, according to discoveries realized by Egyptian astronomers. So were the mountains at the corners (Mediterranean the very Green; Apit the Horn; Bâkhû the Mountain of Birth; and Manu the Region of Life), oriented according to the four cardinal points (see Figure 4). The four peaks were identified with the farthest mountains known, but when further explorations discovered these weren't the limits of the earth, they were "just withdrawn from sight". These discoveries removed the previous landmarks as boundaries of the earth, substituted by a river circulating the box (Maspero, 1901, pp. 21-23). The mountains limiting the world soon became unreachable for humans—according to official relates—and the narrow valley between them and the river was filled with dense air and an eternal night which made it impossible to be inhabited or trespassed.

Figure 4. "An attempt to represent the Egyptian universe" (1897)



Source: Faucher-Gudin, from Maspero, 1901, vol. 1. Public domain

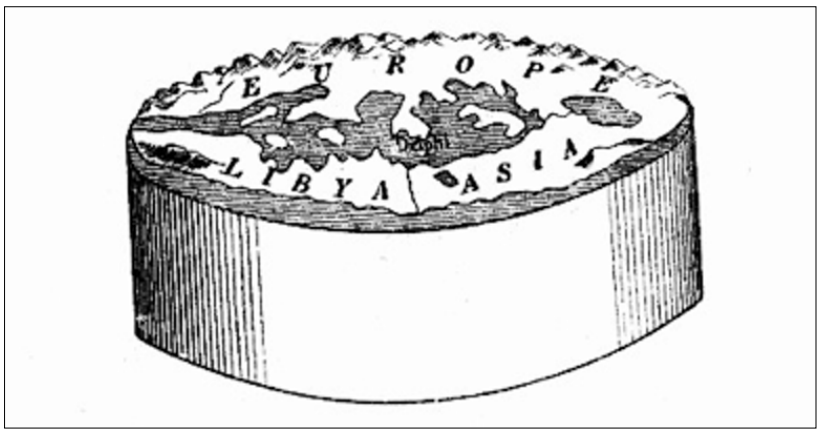
Greece, the difficult task to evolve with discoveries (750-30 B.C.E.)

We have much better knowledge about Greek culture than about previous ones, thanks to written records in the form of literature, philosophy, historical accounts and legal documents that have been preserved and studied extensively over the centuries. In this civilization, which owes so much to the previous ones, there is still an attempt to link the origin of the world with natural processes, through a mixture of scientific observations and metaphysical attempts to justify contemporary beliefs. Geography was closely related to the understanding of cosmogony because understanding the origins of the earth meant understanding its creation. During the archaic period, between the 8th and 6th centuries B.C.E., it was believed that the earth was a round plane resting on columns, with the subterranean world Tartarus underneath. In the recollection of Greek mythology known as Theogony, written by Hesiod around 600 B.C.E., the original universe was Chaos, an irregular material from which Earth (Gea) was generated, and later Uranus, the sky, covered the former and protected it to provide a safe place for the gods (Téllez, 1994). It is possible to find an interesting dichotomy between Chaos and Gea:

> The first is like the original opening, an original spatiality without form, unlimited and undefined… Later on, came Gea, opposed to Chaos.… (If Chaos represents the unlimited) Gea is the delimited space, defined, with clear borders, that transforms itself into safe soil for men and divinities. (Colombani, 2008)

Borders organized the territory, being this the place where humans could live safely. The former entrusted, therefore, a special relevance, always considering the vision of the known world as self-centered, and the more distant from the middle of the known world, the self and its house, the more chaos and ambiguity could be found. At the end of the archaic period, Anaximander of Miletus (6th or 5th century B.C.E.) discovered how to measure solstices and equinoxes and was thereby able to realize the first cartographic translation ever known. It was realized on a column known as Gnomon, possibly the first cartographic map known in the Occident. Gnomon represented the world, as a column surrounded by air, in the middle of the Universe, that could not fall because it was "right in the center". Farinelli (2007) refers to the Universe of Anaximander (see Figure 5), the first philosopher to describe the order of things, like a round space filled with equal and opposite strengths that pushed from the outside to the center, where the earth was located, in the only point where these strengths were balanced. The oikoumene (inhabited world) occupied the surface of the cylinder and was divided into three parts, Europe, Asia and Africa (Libya), separated by the most relevant rivers. Despite the work of Anaximander being known only through secondary sources—such as his map—he is considered the first to realize a mechanical model of the world, attempting to create an inclusive model with terrestrial and celestial elements, starting based on traditional cosmogonies adapted to contemporary discoveries (Siebold, n. d.). A map that shows several similarities with the previously depicted Babylonian Map of the World.

Figure 5. Anaximander's reconstruction of the world was realized by his successor Anaximenes. The known lands, Europe, Libya and Asia are circumscribed by the ocean, which represents a perfect circle



Source: Arthur Cavanagh

Anaximander's discoveries were not deeply relevant for later cultures, at least as those of Plato and Aristotle, who played a greater role in the definition of our concept of the earth during the Hellenistic period. In fact, according to the Greek philosopher and geographer Strabo (circa 64 B.C.E.-24 C.E.), the reasoning on the origins of the universe was based equally on mythical, philosophical and scientific thoughts. The Greek structure of the world was based on two types of cosmogonies: the first one mythical and the second one based on evidence, reason and debate (Gargaud et al., 2011, p. 576). Plato, in his dialogues Timaeus, described the Universe as spherical, with rounded movements of the celestial bodies, a metaphysically perfect description that was hard to justify also considering the still reduced contemporary astronomical knowledge. Within these descriptions, we also find the word óros, which means both "mountain" and "border". The Greeks, and by extension, all European civilizations that grew after them, recognized mountains as the first limit for their development (Farinelli, 2007). Hacyan describes Aristotle's idea of the world in the following way:

> (…) the earth was spherical in the middle of the Universe, and the sky, celestial bodies and stars organized in different spheres moving around, the latest defining the border with the empty and the void. (Hacyan, 2001)

It was a very difficult explanation to figure out, and the author did not try to justify or explain it further. Again, it is difficult to imagine how all these theories were assumed by common citizens, if at all. Were they able to discern between the real and the imaginary, or did they just trust literally the explanations they received by priests, mathematicians and philosophers, is difficult to discern? This draws attention to how ambiguous these explanations were compared to the emerging theories based on scientific and natural observations around the school of Miletus.

Roman Empire and early Christianity, pragmatic boundaries (753 B.C.E.-500 C.E.)

If all the cultures here presented had expanded their territories to the limit of their natural boundaries, the Roman Empire surpassed all imagination in its conquest. This expansion required an enhanced concept of territorial limits to defend new possessions from incursions and settle boundary disputes between local authorities. Additionally, the need to establish new colonies or divide new public domains also demanded a clear understanding of territorial boundaries. The Greeks refined and improved cartographic knowledge under the patronage of Rome, which helped the empire's campaigns and territorial expansion, as well as understanding the inhabited world and distances between settlements. The theoretical developments of the Greeks, which were further enhanced in the early Roman period, were applied in practical ways by Rome, which had more tangible and practical necessities. Map-making became a relevant aspect of land survey, with legal, administrative and taxation purposes. As such, topographical accuracy and representation were secondary to legal and administrative accuracy. These maps also led to improved efficiency in the city's administration and public works. While the Rome expansion program pretended to delete known frontiers, the geographical limits they encountered, like oceans, deserts and mountains, made it difficult. Borders were only displaced (Prados et al., 2012, pp. 19-22).

The Romans adopted Greek myths and also their cosmogony, keeping the origin of life on earth and the concept of an inhabited world practically unchanged. Despite the practical profile of cartography in Rome, several descriptions can be found related to religious functions. For example, the 174 B.C.E. map of Sardinia, one of the earliest maps produced by Romans, was used for thanksgiving to the gods for the conquest of the island (Harley & Woodward, 1987, pp. 234-257). In Rome, Ovid (43 B.C.E.-17 C.E.), the most involved poet dealing with the origins of the earth, described in the first book of the Metamorphoses how an unknown God organized all the elements out of undeveloped and confused Chaos. The creation of the world is a mixture of scientific and supernatural events, starting with the creation of fire and air. Below these elements, heavier rocks, dirt and other elements were created, configuring Earth as the center of the universe. Later on, water flowed all over this world. Only after all these elements were created did this god start to organize and detail them, creating mountains and fields and populating the earth with animals and human beings. Mother Earth, the supreme goddess of the earth, began the genesis after chaos.

Plutarch (circa 46-120 C.E.) in the introduction to his Parallel Lives, talks about geographers as people who

> (…) squeeze onto the edges of their maps parts of the earth that escape their knowledge, with notes explaining "everything beyond is sandy desert with no water or full of wild animals" or "unexplored marsh" or "Scythian frost" or "frozen sea" (…) with permanent updates originated by Roman's discoveries and conquests. (Harley & Woodward, 1987, p. 253)

He shows in a descriptive way how generic and sometimes impossible solutions were given to the "unknown", without any logical justification. Again this "unknown", could be linked to the *nichts-objekt* (no-object) or the void in Lacanian psychoanalysis. Unknown elements, as everything outside a previously established boundary, condition originated by the boundary itself.

Christianity gained a relevant role in the Roman Empire during the 3rd century C.E. and accomplished a *tabula rasa* with previous cosmogonies in an attempt to erase the previous oppressors of the early Christian steps. The Christian period of the Roman empire is hence an interesting case to study further. New borders emerge alongside each new religion, accompanied by the introduction of fresh taboos. In the case of Christianity, this led to the fortification and building of walls as a means of demarcating the boundary between the faithful and the profane. This is rooted in the concept of purity in anthropology, which views the separation of the sacred and the profane as essential for maintaining the integrity and coherence of a religious community. The construction of walls thus becomes a physical manifestation of this separation and a way of maintaining the purity of the community. In the case of Christian Rome, the building of walls was not only a means of defense but also a way of marking the city as a sacred space, separated from the surrounding world of pagan beliefs and practices.

Not surprisingly, the Romans are famous for their construction of defensive walls, which were built to protect their cities and borders from external threats. The advances in technology compared to previous civilizations let many of these infrastructures reach our days. One of the most famous of these walls is Hadrian's Wall, built in the 2nd century C.E. in what is now northern England, which served as a defensive boundary against the tribes of Scotland. The Romans also built walls around their cities, such as the Aurelian Walls around Rome, which were built in the 3rd century C.E. to protect the city from invasion.

Mary Douglas's theory of purity provides an interesting lens through which to view the construction of walls in ancient Rome (Douglas, 2002). According to Douglas, purity is a social construct that involves the maintenance of clear boundaries between categories of people, objects and ideas. In her view, societies develop elaborate systems of classification and taboos to ensure that these boundaries are maintained and that impurities or "dirt" do not threaten the social order. This theory can be applied to the construction of walls in the context of defending cities and countries. Douglas's theory posits that societies create systems of classification and boundaries to distinguish between what is pure and what is impure and that these systems serve to maintain social order and prevent chaos. She argues that boundaries create a sense of clarity and certainty about what belongs and what does not, and that they allow individuals to feel a sense of control over their environment. Douglas also stresses the importance of the skin and holes of the body as symbolic boundaries that separate the individual from the outside world.

Similarly, the construction of walls around cities and countries can be seen as a way to establish symbolic boundaries between what is inside and what is outside. These walls serve to protect the city or country from external threats and create a sense of security for those inside. The construction of walls also serves to create a sense of identity and belonging, as those inside the walls are seen as part of a distinct group that is separate from those outside. Moreover, Douglas's work on the Levitical laws of atonement

also points to the significance of boundaries about purity and danger (1993). This emphasis on boundaries and purification can be seen as a way to establish a sense of order and control over the natural world, which is seen as dangerous and unpredictable.

At the same time, the Roman empire expanded and faced the need to secure its borders, Christianism consolidated through a complex process, from being considered a threat to the established polytheistic religious and political order, to becoming the official state religion with Theodosius during the late 4th century. Looking at Genesis to understand the Christian's vision of the beginning of the Universe, it shows as a dreamlike attempt to explain how our world was created, not so different from poets like Ovid. More than ever, it is necessarily an act of faith in the Holy Scriptures, forgetting everything not described there and all the astronomical advances realized up to the moment, helped by the cultural collapse experimented with under the Roman Empire (Russo, 2013):

> [1:1] In the beginning when God created the heavens and the earth,
> [1:2] the earth was a formless void and darkness covered the face of the deep, while a wind from God swept over the face of the waters.
> [1:3] Then God said, "Let there be light"; and there was light.
> [1:4] And God saw that the light was good; and God separated the light from the darkness.
> [1:5] God called the light Day, and the darkness he called Night. And there was evening and there was morning, the first day.
> [1:6] And God said, "Let there be a dome in the midst of the waters, and let it separate the waters from the waters."
> [1:7] So God made the dome and separated the waters that were under the dome from the waters that were above the dome. And it was so.
> [1:8] God called the dome Sky. And there was evening and there was morning, the second day.
> [1:9] And God said, "Let the waters under the sky be gathered together into one place, and let the dry land appear." And it was so.
> [1:10] God called the dry land Earth, and the waters that were gathered together he called Seas. And God saw that it was good. (*New American Bible*, 2002, The Book of Genesis 1:1-1:10)

The Roman and Greek perceptions of the world's origin were broadly accepted for a long time until the 15th century when new scientific theories emerged.

Discussion and conclusions

Ancient civilizations attempted to eliminate the original chaos of the universe by creating conceptual boundaries that allowed for the advancement of life and civilizations. Looking at these civilization behaviors has pointed out some common characteristics between ancient cosmogonies. Each of them started with chaos, usually related to water, and only later on an ordered structure was created after the separation of the sky

from earth, which shows the great relevancy of limits as organizers of space. Creation stories often involve the separation or division of elements or forces. For example, in the Babylonian creation, the god Marduk separates the primeval waters into two parts to create the heavens and the earth.

An ambivalence in every civilization between religious beliefs described in sacred papers and everyday reality has been detected. Moreover, it is difficult to find any clarification on how the man could actuate in these borderlands, next to the void, without having any real contact with it. The creation of the world has often been a mixture of scientific and supernatural events, facing theoretical and theological issues with more tangible and practical necessities. The centrality of the country or ruling city-states has been identified in all civilizations; in ancient times it was used to demonstrate a relation between the rulers and gods, who were located at the center of the known world. Despite this common consideration, cosmogonies also offered a more inward-focused approach where the outer limits played a key role in the organization of the earth.

These models bring a distinction between closed borders, where defensive and fighting elements like control towers or walls were built, and open borders where the fall to an abyss or void was the continuum of the known world. These assertions made those who mentioned them closer to the gods and divinities, being a powerful tool for keeping distance from their citizens. Open borders can also be related to peaceful cultures or civilizations that due to the geographic character of their land did not need to control their borders, like the specific case of the desert areas of Egypt which were not under pressure. The transition from two-dimensional to three-dimensional models also offered an opportunity to expand the idea of open borders, as the known world, under the shape of a column, a cube or later on of a sphere, extended from the domains of a single civilization to the whole known world.

The purpose of the Great Wall of China, the most monumental manifestation of a border, whose construction was started by the first emperor of China Shi Huangdi who ruled from 221 to 210 B.C.E., can be assimilated into the use foreseen by Romans and presented above. It was raised to protect China from the nomadic tribes that lived to the north, especially the Xiongnu. The Great Wall of China could be seen as a physical manifestation of the Chinese people's desire to maintain a sense of purity and separation from the "other" represented by the nomadic tribes to the north. The wall also served to mark a boundary between the civilized Chinese world and the wild, untamed world beyond.

In this sense, the construction of physical walls, in China, the Roman Empire or everywhere else, can be seen as a symbol of the importance of maintaining social boundaries and the need to protect oneself from outside threats. It's possible to draw a connection between the construction of any territorial wall and the ideas of purity and danger discussed by Douglas (1993, 2002), as both relate to the creation of boundaries and the need to maintain a sense of order and control. It is also possible to draw a connection with the concept of *tabula rosa*, marking a new beginning and a clear boundary between the past and the future, suggested by the analysis of Christianity as a new religion.

Another aspect that would need a deeper study is the difference observed between two-dimensional and three-dimensional models. While Sumerians, Chaldeans and Greeks before 800 B.C.E. were satisfied with simple two-dimensional models of the world, Babylonians, Egyptians and Greeks after this date needed a much more complex model, using three dimensions to describe how their world worked out.

Anaximander's earth floating in the middle of the Universe has many common aspects with the other cosmogonies introduced, among them the problem of their deeper definition of the border. To forbid access to the fairest areas in the world or close them behind defensive walls were surely tactics that helped less culturally-minded citizens but did not answer the question about how there could exist a limit where water could not fall and consequently where it would eventually fall, a question that priests and philosophers usually did not openly answer. The paper showed very similar cosmological constructions which can be the result of knowledge transfer between these civilizations, but also the result of applying terrestrial experiences to the higher pantheon of gods. All other aspects to be resolved outside the real experience receive more imaginative solutions. Astronomical and mathematical advances left behind the idea of plain earth, as few observations that did not need any particular tool easily reflected this reality to those who wanted to listen. Apart from the pure theoretical consideration about the shape of our world, like the one by Pythagoras who imagined the earth as a sphere "because it is a perfect geometric form" and being careless of borders so that nothing could fall into the void (see Figure 6), we can consider Aristotle as the first philosopher to imagine earth as a sphere in consideration of several astronomical observations.

Figure 6. Drawing of an old Greek coin made under Emperor Decius, representing Pythagoras with a spherical world over a column

Source: Baumeister, Denkmäler des klassischen Altertums. 1888 Band III, Seite 1429. Public domain

The different positions of the stars with the horizon depending on the observer's location on the earth, the different heights of the Pole Star depending on the place from where it was measured, the simple sensation that ships offer when approximating to land, when first is visible only the top of the mountains and only later the plain soil and harbors appear, or the circular shadow that we can observe during moon eclipses, would be very hard to defend if earth would not be spherical, as Aristotle affirms in Περὶ οὐρανοῦ (De Caelo). These first-hand materials are at the base of the Greek investigation of nature (Kahn, 1960). For Greeks indeed, maps and geography were part of

a wider speculative inquiry into the order of things: they were both written and visual explanations of the universe's origin and the role of mankind in it.

So why have many civilizations continued to believe in a flat earth for a long time after Aristotle's observations? Apart from the possible "Flat Error" pointed out by Russell (1997), maybe it should introduce consideration of the common sense of people who did not leave their dwelling and were indoctrinated by priests and later on the Catholic Church. Lactantius interpreted the Holy Scriptures against Aristotle's considerations, defending an easier concept to be assumed by believers as early as the 4th century. Scientists and religious leaders who had access to older treatises and books could not forget the observations made by the Greeks, but it cannot be assumed that all their explanations were to be treated as literal beliefs. In some cases, the use of metaphor could have helped to explain reality and should be understood that way. The diffusion of maps and cartography, in general since the early modern era, when there was little discussion about the spherical shape of the earth, didn't remove several ancient legacies: they were enriched with drawings of monsters and imaginary creatures in their frames, like a premonition of what was waiting for the traveler in his voyages, demonstrating how long the influence of these beliefs lasted (Scafi, 2006). Besides, only the circumnavigation of Ferdinand Magellan and Sebastian Elcano between 1519 and 1522 the tangible proof of the lack of boundaries was given.

Comparing ancient and contemporary border realities, the fears induced and their definition are still the same, kept alive by the political establishment, today much more related to economic than religious power. Compared with current days, in earlier periods power and religion were intimately linked together. Maybe we have changed monsters for new fears, but little has been done to erase borders to economically, socially and culturally balance the territory (Muñoz Ramírez, 2008; Pain, 2000). Land structure is commonly originated by historical wars, political fights and post-war treaties, and is actually kept alive to defend privileges and resources that are the origin of the welfare state. Like in the past, every line or wall divides the land into two territories with asymmetrical strengths. A step is needed toward erasing the inheritance of cosmogonies of the past, which define our contemporary concept of borders as frightening producers.

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