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Why Did the Cradle of Civilization Collapse?

Abstract

The Sumerian civilization, the cradle of civilization, is remembered for its numerous discoveries and contributions to human history from 4000 to 2000 BC. The Sumerians built irrigation canals, practiced agriculture, and developed architecture. Why did such a highly developed civilization—the Sumerian—collapse? What factors led to the demise of the Sumerian civilization?

In search of answers to these questions, scholars have turned to various sources. Thus, all scholars confirm that the territory inhabited by the Sumerians was occupied by the Akkadian king Sargon, who created the world's first empire and brought Mesopotamia under his control. Numerous attacks, in turn, weakened the Sumerian city-states and their culture, leading to their decline.

This article, examining the causes of the collapse of the Sumerian civilization—the cradle of civilization—based on an analysis of articles and sources by various scholars, concludes that the collapse of the Sumerian civilization was not due to a single cause. These ruptures were interconnected ecologically, politically, and economically. The consequences that led to the end of the Sumerian civilization were also examined and analyzed.

Thus, the collapse of the Sumerian civilization taught world history very important lessons: no matter how advanced a society is, it will always have small ruptures.

Keywords: *Sumerian Civilization, Cuneiform Writing, Irrigation Systems, Ziggurat, Collapse of Civilization*

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Sivilizasiyanın beşiyi niyə çökdü?

Xülasə

Sivilizasiyanın beşiyi olan Şumer sivilizasiyası eramızdan əvvəl 4000–2000-ci illər arasında çoxlu kəşfləri və bəşər tarixinin inkişafına töhfələri ilə yadda qaldı. Şumerlər suvarma kanalları tikmiş, əkinçilik və memarlıqla məşğul olmuşlar. Nə üçün belə yüksək inkişaf etmiş sivilizasiya – Şumer sivilizasiyası – dağıldı? Şumer sivilizasiyasını hansı səbəblər uçuruma apardı? Bu sualların cavabını axtarmaq məqsədilə müxtəlif mənbələrə müraciət olundu.

Belə ki, bütün alimlər təsdiq edir ki, Şumerlərin yaşadığı ərazi dünyada ilk imperiyanı yaradan Akkad kralı Sarqon tərəfindən işğal olunmuş və Mesopotamiya onun hakimiyyəti altına keçmişdir. Ardıcıl zərbələr öz növbəsində Şumer şəhər-dövlətlərini, eləcə də mədəniyyətlərini zəiflətdi və onları tənəzzülə apardı.

Bu məqalədə sivilizasiyanın beşiyi olan Şumer sivilizasiyasının süqutunun səbəbləri müxtəlif alimlərin məqalə və mənbələrinin təhlili əsasında araşdırılaraq belə nəticəyə gəlinmişdir ki, Şumer sivilizasiyasının süqutu tək bir amillə bağlı deyildi. Həmin amillər ekoloji, siyasi və iqtisadi baxımdan bir-biri ilə əlaqəli idi. Bununla yanaşı, Şumer sivilizasiyasının sona çatmasına gətirib çıxaran nəticələr də araşdırılıb təhlil edilmişdir.

Beləliklə, Şumer sivilizasiyasının süqutu dünya tarixinə çox mühüm dərslər verdi: cəmiyyət nə qədər inkişaf etsə də, onun daxilində həmişə kiçik boşluqlar qalacaqdır.

Açar sözlər: *Şumer sivilizasiyası, mixi yazı, suvarma sistemləri, zikkurat, sivilizasiyanın*

Introduction

While thinking of the cradle of civilization, the Sumerians, who settled on the Tigris and Euphrates rivers in Mesopotamia, first come to mind. The Sumerian civilization is one of the earliest examples of civilization in human history. They are remembered for their many discoveries and contributions to the development of human history between 4000 and 2000 BC. According to the research of the greatest scientists, the opening of the first schools in history and the creation of writing are associated with the name of the Sumerians. The remains of cuneiform writing, which played a major role in the opening of these schools and the development of civilization, were first found in the village of Uruk (Kramer, 1956, p. 3). Scientists have determined that Uruk was the first true city-state (Pollock, 1999, p. 5).

Research

The Sumerians are best remembered for their farming. Complex systems had to be developed for the irrigation of the fields. According to research, the Sumerians built irrigation canals and dams to control the flow of water. They cultivated wheat, barley, and other grains to make the land fertile (Marcellus, 2023). Archaeological research shows that, if we look at the relationships between city-states, we can see that they exchanged gifts among themselves. This was mainly to maintain diplomatic relations and trade networks with each other.

According to Marc Van De: “In a hoard of precious items found at Mari, there was a bead inscribed with the name of Mesannepada, king of Ur; the group of objects was likely given by one king to the other. The ruler’s wife at Lagash, Baranamtara, is known to have exchanged presents with her counterpart at Adab, and this was probably common practice” (Marc Van, 2016, p. 54).

There is no doubt that the Sumerians were professional architects. In 2100 BC, King Ur-Nammu built the first real ziggurat. Such structures were decorated by architects with bronze elements and rich cones (*The Ancient Sumerians*). If we look at the analysis we have done, a question arises: why did such a highly developed civilization—the Sumerian civilization—collapse? What reasons led the Sumerian civilization to the abyss? All scholars confirm that the area inhabited by the Sumerians was occupied by the Akkadian king Sargon (2334–2279 BC), who created the first empire in the world and took Mesopotamia under his rule (Joshua Mark, 2023). From here it is likely that, despite being

strong and developed, with good fertile lands, and despite the efforts of the city-states to maintain diplomatic relations with each other, those invisible gaps within Sumer hampered its development.

Main Part

According to Thorkild Jacobsen and Robert M.Adams (1958), "Progressive changes in soil salinity and sedimentation contributed to the breakup of past civilizations" (p. 1251). Modern soil analyses indicate that central and southern Iraqi soils contain high levels of salts and exchangeable sodium, which are exacerbated by a semi-arid climate and poor soil permeability. Scientific research into the salinization process shows that it has existed for millennia. According to the sources, the ancient Sumerians used their own techniques to prevent salinization and manage excess water in the land. One such method was called *weed-fallow*. This meant that land was cultivated for one year and then left fallow the next. This technique helped them to control soil productivity by creating a dry zone that prevented salt accumulation through capillary action (Jacobsen & Adams, 1958, p. 1251).

One of the scientific studies by Jacobsen notes that one of the most important and serious phases of salinization in Mesopotamia occurred in southern Iraq, where the Sumerian city-states were located, covering the years 2400–1700 BC (Jacobsen & Adams, 1958, p. 1252). One of the main reasons for this was the war between Girsu and Umman over land and water. After these constant conflicts, the ruler of Girsu, Entemenak, built a new canal from the Tigris to irrigate his lands in addition to the Euphrates canal. Although the land was initially fertile, over time, due to over-irrigation, seepage, and flooding, the groundwater level in the soil rose, and the salts from underground led to salinization of the soil (Jacobsen & Adams, 1958, p. 1252). This fact shows that the lack of careful control of irrigation systems and their ineffective management ruined agriculture and thus led to the weakening of Sumerian culture. Thus, political power shifted toward the center.

Studies show that agricultural productivity in southern Mesopotamia experienced a marked decline between 2400 and 1700 BC as a result of soil salinization. The average yield of Girsu in southern Mesopotamia was 2,537 liters, and by 1700 BC in Larsa, it had fallen to 897 liters. According to Jacobsen and Adams (1958), "By 1700 B.C., the cultivation of wheat had been abandoned completely in the southern alluvial plain" (p. 1252). As we can see from this statement, the level of salinization increased so much that the less durable wheat was removed from the crop rotation due to the increase in soil salinity. We can see this not only as a collapse of agriculture but also as an ecological collapse that led to the economic ruin of the Sumerian city-states. As the harvests decreased, it became impossible to sustain the large urban population and administrative system, accelerating the collapse of the Sumerian civilization. According to Jacobsen and Adams (1958): "The southern part of the alluvial plain appears never to have recovered fully from the disastrous general decline which accompanied the salinization process... Many of the great Sumerian cities dwindled to villages or were left in ruins... but that growing soil salinity played an important part in the breakup of Sumerian civilization seems beyond question" (p. 1252).

By examining the facts, it can be concluded that this is a historical example of how ecological pressures can seriously affect cultural continuity and lead to the collapse of civilization. Based on the research conducted, the climate crisis that occurred in Mesopotamia between 2200 and 1900 BC played a significant role in the ecological collapse of the Sumerian civilization. In 2200 BC, the northern and southern parts of Mesopotamia were under the rule of the Akkadian Empire. According to Weiss (2017) in *42 ka BP Megadrought and the Akkadian Collapse*, "The megadrought, however, eliminated dry-farming cereal cultivation across the Khabur Plains and the north Mesopotamian and Syrian plains to the east as well as the west. The flow of northern imperial agricultural and finished product levies to provincial centers and to the Akkadian capital terminated" (p. 105).

After this event, the Akkadian Empire began to collapse economically, having lost its source of income from produce. As a result of this drought in Mesopotamia, the population of northern Mesopotamia was forced to migrate to areas around rivers such as the Euphrates and Orontes. One of the most significant migrations was to southern Mesopotamia, where they settled in urban areas by the rivers. The wave of migration grew so large that, according to Weiss (2017, p. 112), "the population began to double during the Ur III period." Sources even indicate that the Sumerians built

fortified walls around their cities to defend against Amorite incursions (Weiss, 2017). However, Amorite tribes arriving from the north breached these fortified walls and flooded into the cities (Weiss, 2017, p. 118). We can therefore conclude that the ecological collapse of the Sumerian civilization can be linked not only to climatic factors but also to changes in social structures, as demographic growth inherently led to internal conflicts. Furthermore, the demographic growth of the population also led to political transformation, and Ur III collapsed. The drought event that occurred in the Near East has also been confirmed by archaeobotanical research. According to Riehl (2008), as the demand for barley—which is resistant to drought—increased, the cultivation of water-sensitive crops such as grapes, flax, and wheat, which play a fundamental role in human life, decreased. The author attributes this to the impact of increasing drought on agricultural practices (Riehl, 2008, p. 48).

If we analyze these events more deeply, the decline in wheat and flax cultivation would have had a direct impact on the Sumerians' trade income. Scientific research has consistently shown that the Sumerians traded with neighboring peoples, exchanging goods such as grain. Furthermore, if we consider it not only as a source of income but also as a source of protein, the health of the population is one of the most important nuances here, which in turn affects social and economic structures. According to Riehl (2008), "Among the cereals, *Hordeum* spp. (barley) is consistently the main cereal crop throughout the Early and Middle Bronze Age Near East in relative presence, proportion, and frequency (Figs. 2, 3). Today, barley is often the main cereal grown in arid and semi-arid environments due to its higher tolerance of unfavorable growing conditions such as drought stress and soil salinity compared to wheat" (p. 45). Therefore, we can clearly see why barley was cultivated more than wheat in this region. During the long years of drought, the Sumerians relied more heavily on barley. The reasons for the collapse of the Sumerian civilization are interconnected; that is, each reason plays a significant role in the collapse of any civilization. Let us examine the collapse of the Third Ur Dynasty. According to Norman Yoffe in *The Collapse of Ancient Mesopotamian States and Civilization*, a bureaucratic pyramid system was established during Shulgi's reign, and the king was even deified (Yoffe, 1988, p. 49). In his research, Yoffe, relying on Jacobsen, emphasizes that state administration weakened during the reign of Ibbi-Sin, the last ruler of the Ur III Dynasty. Local city-states no longer wished to be under Ur's suzerainty, and the governor of Mari, Ishbi-Erra, took action to consolidate his authority in the southern city-state of Isin (Yoffe, 1988, p. 50). Based on this source, it can be argued that the rigid bureaucratic system established by Shulgi, ruler of the Ur III Dynasty, was not changed by his two successors. In fact, Yoffe (1988) investigated that they did not succeed in any of their attempts. That is, the bureaucratic system persisted for a long time, and the states no longer wanted to be subordinate. When that happened, attacks against the state began. Finally, after 24 years of rule, the Elamite representative, Ishbi-Erra, was deposed (Yoffe, 1988, p. 50).

The weakening of the Ur III Dynasty can also be linked to the weakness of its defensive fortresses. According to research, while initially investigating ecological reasons, we learned that the Sumerians built defensive fortifications against the Amorites. However, these fortifications proved ineffective; the Amorites penetrated the interior, and eventually, the descendants of the Amorite desert nomads seized political power in the state (Weiss, 2017, p. 118). The fall of the Ur III Dynasty can also be linked to the weakness of central authority. During the reign of Ibbi-Sin, the internal army and administrative control were weak, so the states rebelled against the center. This led to the fragmentation of the state.

Let us look at the analysis of the fall of the Sumerian civilization using other sources. In Marc Van De's research on the history of the Near and Middle East, we can see that there were disagreements within the Sumerian city-states. According to the results of these studies, the reason for their internal fighting was to gain more power and subjugate other city-states. Also, one of the important reasons was over land and water, which we have analyzed as one of the ecological factors that affected the fall of the Sumerian civilization.

Let us analyze the Umma–Lagash war as one of the nuances that caused the fall of the Sumerian civilization. According to Marc Van's research, "The war between the southern city-states of Umma and Lagash over an agricultural area that they both claimed is the best-documented event of the Early

Dynastic period. Over a period of 150 years, five rulers of Lagash and one of Umma devoted royal inscriptions to it, including large monuments like the *Stele of the Vultures* (Figure 3.2)" (Marc Van De, 2016, p. 53). In this war, they fought over a field called Guidena. According to Enmetena's writing, Mezalim, the king of Kish, directed by Enlil, the father of the gods, had drawn a border between Umma and Lagash by placing a stele (Marc Van De, 2016, p. 53). However, Umma violated the border and moved toward Lagash.

We know that religion and language are among the most important factors that united the Sumerians culturally. However, in this war, each side justified its actions by speaking in the name of its gods. Thus, the war continued for 150 years (2500–2300 BC). Border problems continued to be passed down from generation to generation, and as a result, they lost the energy to fight against the threat of invasion by foreign states.

According to Marc Van De, Lugalzagesi, the ruler of the Sumerian city-state of Umma, had briefly unified the Sumerian city-states under his rule, starting with his own city-state of Umma and then subjugating Ur, Uruk, and Lagash (Marc Van De, 2016, p. 54). According to Marc Van De, "The process of conquest and unification culminated at the end of the Early Dynastic period when the king of Umma, Lugalzagesi, conquered Ur and Uruk and then defeated Uru'inimgina of Lagash, thus governing the entire south of Babylonia."

From this source, we clearly understand that he had united these city-states and brought the south of Babylonia under his rule. In this context, Babylonia is used as a geographical term. Researchers use the term *Babylonia* to describe the territories more precisely, especially the south of Mesopotamia. This term is used to indicate the geography before the rise of Babylonia. As Marc Van noted, "Two distinct zones make up Mesopotamia: Assyria in the north and Babylonia in the south. These are in origin political terms referring to ancient states that existed after 1450 BC, but they are often used purely as geographical designations at any time in history—I will use them in this way here. Many scholars utilize another political name, *Sumer* (or at times the non-existent *Sumeria*), to refer to the southern half of Babylonia in the fourth and third millennia. I do not follow that practice" (Marc Van, 2016, p. 4).

Why was Umma's unification of the southern part of Mesopotamia short-lived? Because the Sumerian city-states did not want to be subject to a central authority—they each wanted power to belong to themselves and to remain independent. Therefore, there was internal division among them. Also, the union created by Lugalzagesi by defeating the Sumerian city-states was considered an external conquest. Therefore, it did not have a solid administrative structure. The conquest referred to here depended solely on Lugalzagesi's personal military power.

After analyzing all this, we see that the Sumerian city-states were so busy fighting among themselves that they failed to see the threat coming from outside. The Akkadians, who later founded the world's first empire, invaded the weakened city-states and created the Akkadian Empire.

In his article *The Fall of Sumerian Civilization*, Professor Arkadiusz Sołtysiak of the University of Warsaw put forward two political approaches. The first of these approaches is that the Sumerian civilization gradually began to disappear with the invasion of the Akkadians in the Bronze Age and later with the changes brought by the Amorites and Kassites (Arkadiusz, 2021, 1739 BC—the year when the Sumerian civilization collapsed). Here, the Sumerian city-state structure, the vitality of the Sumerian language, and the ruler governing in the name of the goddesses (which is why we call the Sumerian city-states theocratic states) were replaced by the new centralized Babylonian state.

However, an alternative approach is that the Sumerian city-states were completely wiped off the map by an event during the reign of Hammurabi's successor, Samsu-Iluna (in his 11th year of rule, which coincided with 1738 BC). This issue is related to the Sumerian rebellions against the central government. According to Arkadiusz Sołtysiak, "The rebellious cities were supported by other Sumerian cities as their revolt gave rise to a hope of return to the model in which the city-states were totally independent. The war lasted four years and ended with the victory of the Babylonian king, but it was a Pyrrhic victory" (Arkadiusz, 2021, 1739 BC—the year when the Sumerian civilization collapsed). Although the Sumerian city-states were subject to the central government, the Sumerian

language did not completely disappear even though it lost its vitality. Also, Hammurabi granted autonomy to the Sumerian city-states, although they had to pay taxes in return. However, their dissatisfaction with this—resisting centralization and seeking independence in their theocratic states—gradually and slowly intensified the rebellion. As a result of this rebellion, the Sumerian civilization was completely erased from the map. The studies conducted prove that there were no metal mines in southern Mesopotamia. According to Potts, "In southern Mesopotamia we are faced with a situation in which metal ores were completely lacking and yet, not only were jewellery, weaponry, tools, statuary and other cast fixtures made of metal…" (Potts, 1997, p. 164). Modern metallurgical, archaeological, and Assyriological studies confirm that Iran, Anatolia, Cyprus, and Oman were the sources of copper used in southern Mesopotamia (Potts, 1997, p. 165).

The production of copper and bronze from those mines for the Sumerian city-states and their processing required great expense. In addition to the cost, the processing difficulty was also evident. The technology of casting required high-quality facilities. "The nature of a sulphide ore thus often presupposes a two-stage smelting process—reduction of the raw ore to matte, followed by refining to a state in which the metal is pure enough to use" (Potts, 1997, p. 168). One of the most important needs of Sumer for its economic and military superiority was tin for bronze processing, and the lack of tin sources in Mesopotamia made this task difficult. According to Potts, "The sources of the tin used in southern Mesopotamia have been sought from Thailand in the east to Cornwall in the west" (Potts, 1997, p. 174). As we can see, the loss of any foreign source would have led to the cessation of tin imports, and this, in turn, would have halted bronze production. According to Potts, "Gudea of Lagash says he received tin from Meluhha, generally identified with the Indus Valley…" (Potts, 1997, p. 174). One of the main reasons for the collapse of the Sumerian civilization was its excessive dependence on foreign trade and the import of resources. As mentioned earlier, agricultural products were exported in exchange for copper and other raw materials from distant lands. According to Algaze (1993), "This scenario, admittedly hypothetical, helps us to understand the otherwise unexplained sudden collapse of the northern network, an event most clearly discerned along the Euphrates, where Uruk stations such as Hassek Höyük were destroyed (Behm-Blancke, 1984) and Uruk enclaves in the environs of Carchemish and in the Tabqa area were simply abandoned" (Algaze, 1993, p. 107).

Based on this, we can say that the collapse of the Uruk enclaves in the north, which formed the basis of trade at the end of the Uruk period, and the abandonment of the trading stations around the Euphrates and Khabur disrupted the Sumerian trade system. This was due to the fact that outside peoples developed technologically and organizationally through contact with Uruk trading posts. Thus, they began to pose a threat to the trade routes controlled by Uruk (Algaze, 1993, p. 107).

The lack of natural resources forced Sumer to engage in foreign trade. However, the struggle for control of trade routes and the emergence of local states in peripheral regions weakened the Sumerian position in international commerce. The Sumerian production model was based on dependent labor. Even with thousands of workers, productivity remained low. According to Algaze, based on Jacob's notes, "Last, given the labor-intensive nature of the production of exportable surpluses, a final effect of cross-cultural trade on Uruk societies would have been the creation of larger and more complex urban agglomerations to take advantage of economies of scale" (Algaze, 1993, p. 104).

Based on this source, we conclude that Uruk sought to create large cities for workers and concentrate them there, but this model could not last long.

Conclusion

The collapse of the Sumerian civilization teaches us very important lessons. We must understand from this that no matter how developed a society is, there can always be small gaps within it—and these can lead to destruction for various reasons.

This research also shows that the Sumerian civilization collapsed not for one reason, but for multiple interconnected ones. The Sumerian civilization was so developed that it even had its own irrigation systems. As the great Azerbaijani poet noted, "Even if there is a pearl of purity in water, it causes trouble when it is drunk in excess" (Nizami Ganjavi, *The Beauty of Less Talking*).

Scientifically speaking, they became victims of their own successful agriculture. When perfectly developed irrigation systems were left unmanaged amid internal conflicts, they caused salinization of the soil. This, in turn, resulted in a decrease in productivity (Jacobsen & Adams, 1958).

A megadrought in the 2200s BCE disrupted food supplies, and demographics in the city-states worsened, resulting in a population exodus from the north to the south (Weiss, 2017). The Sumerian city-states were never unified. Infighting, such as in the case of Umma–Lagash, weakened them internally and made them unable to resist external attacks (Marc Van De, 2016).

The lack of metal sources in southern Mesopotamia made Sumerian civilization dependent on extensive trade networks abroad. The materials needed for military and economic dominance were imported from foreign lands. However, the Uruk trading enclaves collapsed, and consequently, these supplies were disrupted (Algaze, 1993).

Even though they fell, the Sumerians profoundly influenced later civilizations culturally. Without their contributions—such as writing, the wheel, and timekeeping—human history would have taken a very different path.

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