

## CHAPTER 3

# Ancient Middle Eastern Leadership

## 1. Introduction

Military technology shaped geopolitical structure and economic performance since the dawn of civilization. The pre classical era ancient world provides five case studies for understanding how military technological changes lead to variations in international political structure and economic development. These are the differing city-state systems of Mesopotamia and Egypt after the invention of writing, but before the use of bronze weapons, then the Mesopotamia state system and the Egyptian imperial order after the introduction of bronze weapons and finally, the greater Near Eastern state system after the introduction of horse-drawn chariots in warfare.

The first civilizations of Mesopotamia and Egypt and the Greater Near East are the earliest international political systems in world history. While the early Mesopotamian and the later Greater Near Eastern systems bear resemblance to the early modern European Westphalian system with their equal distribution of capability among the major contestants and emphasis on balance of power, the Egyptian system provides a sharp contrast with its extremely high concentration of capability within the hands of the one imperial power which is often referred to as “the paragon of imperial order”.

## 2. Writing

Developmental puzzles are not unique to the modern world as many also exist from the ancient and classical world. Long before the rise of industrial Europe, there were the first civilizations of Mesopotamia during the fourth millennium and Egypt at the end of the fourth millennium (ca 3500-3000 BC).<sup>49</sup> Next was the puzzling leadership that Mesopotamia had over Egypt after the establishment of civilization. Another was the swiftness of the acceleration of development in several different regions: around 900-700 BC, China, the

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<sup>49</sup> The Indus-Harappan civilization is not included. It was destroyed early by Aryan invasions. Historians still know quite little about the history of the Indus civilization.

Indian Ganges River valley and Greece all produced surprisingly sudden and splendid classical cultures.

In Mesopotamia, the first cities emerged around 4300-3100 BC. Mesopotamia was the very first civilization in human history, and saw the emergence of the first agriculture and writing systems. The most basic fundamentals of civilization came into existence there: agriculture, writing and urban living. During this formation period, culture progressed rapidly: villages coalesced into cities and cities developed into city-states.

Mesopotamia had an arid landscape, which in a way served as an advantage because construction of irrigation networks stimulated the growth of bureaucracy, cities and states.<sup>50</sup> The emergence in 4000-3500 BC of the Sumerian city-state system, in southern Mesopotamia, was probably the greatest turning point in human history. The earliest known writing originates in the Sumerian city of Uruk (in today's Iraq), around 3400 BC.<sup>51</sup> The invention of writing aided administration, facilitated management of a complex society, and drove the rise of cities.<sup>52</sup>

Parallel to and greatly influenced by Mesopotamia, Egypt also surged forward in the period 3500-2800 BC. Benefiting from trade and technological influence from Mesopotamia, the Egyptian culture crossed the critical threshold of civilization within a very short span of time. From its modest pre-written history period, the Egyptian civilization rose suddenly from the desert into its monumental grandeur. The speed of emergence of higher civilization in the Nile Valley is amazing. This period saw villages quickly develop into cities and cities into city-states—and relatively soon, city-states gave way to empire in the Nile Valley. Chiefdoms, towns and city-states appeared by 3300 BC; cities, state formation and organized technology suddenly came together in the last centuries before 3000 BC. The hieroglyphic script was developed during this era. Egyptian civilization coalesced quickly into an empire with only a very brief city-state phase.

The invention of writing was critical for the rise of civilizations. Writing facilitates the storage of information beyond human memory and allows communication beyond face to face distance. Through writing, communication of information becomes easier; people no longer have to rely upon the cumbersome methods of communicating through face to face exchanges by means of spoken words or gestures. The efficiency gains due to writing allowed the rise of complex societies beyond that of simple agrarian villages. Society could now be organized on a larger scale. The invention of writing increased the organizational capability of human societies, enabling a higher level of specialization

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<sup>50</sup> Refer to Wittfogel (1957) and Dudley (1991, pp. 20-21).

<sup>51</sup> Haywood (1997, pp. 16-17, 40-41).

<sup>52</sup> Refer to Dudley (1991, pp. 36-43).

of labor and increased productivity. Together with the appearance of writing came the emergence of a professional priestly class who were the first full-time bureaucrats.

In Mesopotamia and Egypt, with the rise of the first cities after the invention of writing, human civilizations spurred forward with great unprecedented speed. In fact, the speed of development during this early dawn of civilization was rarely matched or surpassed in later eras.<sup>53</sup> The efficiency gains due to the new techniques of information storage and communication were an obvious and important factor behind that speed. Another factor was that Mesopotamia and Egypt (after the invention of writing, but before the use of bronze weapons) had a highly equal distribution of capability among the city-states. Interstate conflicts with the pre-metallic military technology were indecisive. Military indecisiveness hindered the consolidation of capability and resources in the hands of an imperial power. Consequently, capability and resources were evenly distributed among the many constituent city states of the Mesopotamian and Egyptian systems. Within the narrow confine of the Nile River valley and the uninterrupted terrain of the land lying between the Euphrates and the Tigris Rivers, the highly even distribution of capability among the first city-states generated a fair level of political military competition and relativist concerns despite the low economies of scale in warfare. Furthermore, the lack of high concentration of capability also prevented the emergence of either extremely risk-averse or risk-seeking power-induced risk attitude. Therefore, there was consistent rational developmental effort and the first civilizations were propelled powerfully forward.

In sum, during this formation period of the first civilizations, material conditions improved greatly with sudden speed. Human civilizations in Mesopotamia and Egypt rapidly developed. Of special interest was the extreme speed of development of Egyptian culture during its earliest pre-dynastic era, a speed which was not repeated in the succeeding dynastic eras of Old and Middle Kingdom. The extreme speed of development of Egyptian culture during the pre-dynastic era was partly due to the very compact geography of the Nile Valley. In the narrow confines of the Nile Valley, competition amongst city-states was especially intense. It was this competition that propelled the sudden acceleration of Egyptian civilization during its formation period. This exceptional Egyptian energy was lost when the use of bronze in warfare brought forth the first empires among which the earliest and most perfect was the Egyptian Empire.

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<sup>53</sup> Refer to Wesson (1967, 1978).

### 3. Bronze

The use of bronze started in Mesopotamia around 3000 BC. It started only very slightly later in Egypt, also around 3000 BC. Bronze weapons are superior to pre metallic weapons (such as stone and wooden weapons) in strength, sharpness and durability. Consequently, battles became more lethal. The use of bronze weapons and armories led to a more decisive and larger scale form of warfare than conflicts with stone or wooden weaponry. Armies grew in size, with infantry wielding sharp-edged bronze weapons and protected by bronze body armor being the mainstay fighting force.

The use of bronze weaponry affected the relative combined military and economic efficiency between contesting city-states in the Nile Valley and, separately, in Mesopotamia. As bronze was expensive and not easily available, states which were richer and commanded more resources and manpower could now field more and larger infantry legions. These legions were standing armies equipped with expensive bronze weaponry. Consequently, these favorably endowed states conducted war more effectively and enjoyed greater relative combined military and economic efficiency in comparison with other less endowed states. Bronze weaponry also increased the mass factor. The combined effect of a larger mass factor and a more asymmetric relative efficiency was a higher concentration of capability and resources and the undermining of the city-state systems of Mesopotamia and Egypt. Large-scale territorial states and empires began to emerge in Mesopotamia around 2800 BC while Egypt was united under one empire by around 3100 BC.

The changes in Mesopotamia will be examined first. There are two definitions of Mesopotamia: the first narrower definition refers to the land lying between the Euphrates and Tigris rivers, namely the present-day Iraq. The second broader definition refers to the land that lies between the Zagros and Anti-Taurus mountains in the north and the Arabian plateau and Persian Gulf to the south. This area corresponds to eastern Syria, southeastern Turkey, southwestern Iran and the present Iraq. Compared with the Nile River valley, Mesopotamia, in particular greater Mesopotamia, has a more open, complicated and fragmented geography with multiple core areas.

A large quantity of bronze weapons was produced and used in Mesopotamian the period 2900-2334 BC. The Sumerians pioneered the use of bronze weaponry. The battlefields of Mesopotamia were dominated by armies consisting of infantry, wielding bronze weapons and protected by bronze armor, and archers with composite bows. The military technological changes intensified intercity rivalry. Cities erected massive defensive walls to protect themselves. There was a considerable increase in the scale of warfare. Initially, before the emergence of the Akkadian Empire in Mesopotamia in the twenty fourth century BC, the highly symmetrical distribution of capability of the Mesopotamian

city-state system was preserved. The enlarged mass factor due to the invention and use of bronze weapons intensified political military competition without seriously affecting the fragmented geopolitical structure. Consequently, relativist concern increased. Furthermore, given that the even distribution of capability was preserved, relativist concern was elevated without generating either highly risk-averse or risk-seeking power-induced risk attitudes. Development therefore sped up due to the higher relativist concern and without the distortions caused by extreme risk-averse or risk seeking power-induced risk attitudes.

The greater economies of scale in conflict led to territorial expansion of the city-states. Territorial states replaced city-states, and a series of empires was established.<sup>54</sup> Among the earliest conquerors was Sargon the Great of the Akkadian Empire, 2334-2279 BC. This was the earliest empire in ancient Mesopotamia, appearing about six centuries after the establishment of the Egyptian Empire.<sup>55</sup> The Akkadian Empire reigned from 2334-2193 BC. Subsequently, the Empire of the Third Dynasty of Ur ruled between 2112-2004 BC, known also as the Sumerian Renaissance. The Old Babylonian Empire governed ca 1900-1595 BC, and within that span of time saw the rise and fall of the Old Assyrian Empire (1830-1741 BC).<sup>56</sup>

Given the open terrain of Mesopotamia, these empires were more regional hegemonic powers than truly imperial orders. They were unlike the secure imperial order of the Egyptian Empire. They had not truly monopolized, or even come close to monopolizing, military capability within their international political system. The largest of this series of empires, the Akkadian Empire under Sargon the Great, failed to conquer Canaan and failed to subdue either the Hurian kingdoms of the Khabur River valley or the Gutian tribes in the Zagros Mountains. Sargon the Great and his successors constantly faced internal revolts and foreign challengers. Moreover, the Akkadian Empire collapsed within a century, mainly due to the attacks from the Gutians in the central Zagros Mountains.

More often than not Mesopotamia was a field for great powers jockeying for dominance. The more important players were the Elamites of coastal Persia, the Babylonians or Sumerians or Akkadians of Lower Mesopotamia, the Assyrians of Upper Mesopotamia, and the Hittites of Anatolia. The constant great power rivalry of the Mesopotamia system drove the geographical expansion of the system as contestants sought greater power through alliance with external players, overseas colonization, or trade. New components were constantly

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54 Refer to Dudley (1991, pp. 47-76).

55 Refer to Dudley (1991, p. 66).

56 Haywood (1997, pp. 42-43).

being added: for example, the Mycenaean civilization of Greece became involved. Diplomacy and statecraft advanced to a very high level of sophistication, with a good grasp of the concept of balance of power and good use of alliance formations to check potential rivals.

Unlike Egypt, which entered into the imperial era and developmental stagnation soon after the foundation of its civilization, Mesopotamia retained first its city-state system and subsequently its territorial state system much longer. Consequently, Mesopotamian developmental momentum was preserved for a longer sustained period.<sup>57</sup> Since Mesopotamia after the introduction of bronze weapons produced no all-encompassing empire with an extreme concentration of capability, the greater economies of scale in warfare actually increased the intensity of political military competition and relativist concern within the pluralistic Mesopotamian system as the positive scaling effect dominated the negative unbalancing effect and the negative asymmetric effect. Furthermore, the absence of an all-powerful empire monopolizing capability within the system preempted the emergence of an extremely risk-averse power-induced risk attitude and its associated economic distortions.

The higher relativist concern and moderate power-induced risk attitude of the Mesopotamian system, when compared to that of the Egyptian imperial order with its low relativist concern and highly risk-averse power-induced risk attitude, manifested itself in many Mesopotamian achievements. Mesopotamia exhibited greater speed of development as well as a high level of creativity in all fronts. The city-state system and the succeeding territorial state system of Mesopotamia produced significant developmental achievements. Mesopotamia developed the cuneiform script, the first system of writing, which allowed scribes to record business transactions, legal documents, lists of items, and other articles. Mesopotamia also invented libraries and recorded histories. The region also created alphabetical writing, a system of writing taken up by other cultures and from which all alphabets used in the world are derived. Other achievements include the first wheeled vehicles, the potter's wheel, the first surviving codes of law (promulgated by Urukagina, King of Lagash, around 2350 BC), the use of bronze in production, and of course, the first city-states.

On the literary front, Mesopotamia produced much literature of high value. Great religious literature included *Enuma Elish* and *Gilgamesh*. The Code of Hammurabi (ca 1792-1750 BC) stands as one of the greatest pieces of early juridical literature. Although Hammurabi's Code is not the first code of laws (the first records date from four centuries earlier), it is the best-preserved legal

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<sup>57</sup> Refer to Wesson (1967, 1978) and Bernholz (1998, pp. 114-121) in Bernholz et al. (1998).

document reflecting the social structure of Babylon at the time. The Code has two hundred and eighty two laws concerning a wide variety of abuses. There were other legal codes that the state further perfected, indicating the state's interest in furthering economic and other development.

On the scientific and technological front, much of mathematical and astronomical science owes its beginnings to the Mesopotamians, who invented the sexagesimal system, used at the time for all types of calculations, and still in use internationally today to tell time. The Pythagorean law was applied as early as the 18<sup>th</sup> century BC, though it was not yet formulated. The Mesopotamians also developed advanced metallurgy techniques for working with bronze, lead, silver, gold and iron. Although iron did not supplant bronze as the main metal for tools and weapons until around 900 BC, it was in widespread use by 1200 BC, a date generally accepted as the start of the Iron Age.

Mesopotamia had a more advanced level of broadly defined statecraft, as exemplified in the perfection of legal codes, than Egypt did. The Assyrians, for example, throughout the duration of their empire, contributed greatly to mathematics, the military, city planning, governmental administration, architecture and the sciences. Besides possessing military supremacy, Assyrians also had unmatched artistic talent.

The story in Egypt is very different. From the beginning of its civilization to 1595 BC, Egypt was largely isolated from the political and military competition of the Near East.<sup>58</sup> Protected to the north by the Mediterranean Sea and the east by the Red Sea, to the west by the great Sahara Desert and to the south by cataracts along the river Nile, Egypt was a single-river valley civilization cut off almost totally from the rest of the world in political and military affairs: although there were cultural connections with Mesopotamia by trade and general diffusion, politically Egypt stood alone for hundreds of years. The Egyptian civilization was over 1,300 years old before suffering its first major foreign invasion.

The great Nile River defined the Egyptian civilization. The Nile floodplain was the most favorable area for agriculture anywhere in the ancient world. Egypt had little need for irrigation or flood defenses. The Nile also served as Egypt's main highway for both communication and transportation, whether of commercial commodities or troops. In sharp contrast to Mesopotamian culture, which ultimately spread civilization throughout all of greater Mesopotamia and then beyond, Egyptian civilization spent its history focused almost entirely on the Nile River and its desert vicinity.

Within the compact geography of the Nile Valley, the use of the first metal weapons, such as the copper axe instead of wooden clubs, increased

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58 Refer to Humber (1980, pp. 36-7) and Dudley (1991, p. 11).

tremendously the effectiveness and economies of scale of warfare. Consequently, metal weapons contributed to the uniting of Egypt, around 3100 BC.<sup>59</sup> The isolated and compact geography of the Nile Valley was best suited for the creation and maintenance of an imperial order: the initial city-state system lasted only a very brief time.<sup>60</sup> The imperial regime practically monopolized capability within the Egyptian system and was stable and non-contestable. Egyptian history, before the incorporation of Egypt into the Greater Near Eastern State system, was a monotonous routine of dynastic successions. The extreme concentration of capability in the hands of the imperial regime resulted in an extremely low level of relativist concern as well as an extremely risk-averse power-induced risk attitude. Imperial complacency and conservatism were the hallmarks of Egyptian civilization during the Old and Middle Kingdom eras. Religion controlled every facet of Egyptian society and the priesthood played a very important role in the command economy of Egypt, with very little room for market forces and individual initiatives. Coin money, for example, was introduced into Egypt by foreigners only in the Late Period.

Mesopotamia, in contrast, had multiple core areas and was much more open to external influence. Consequently, civilizations succeeding the Sumerians operated either under a city-state system or a territorial state system, with hegemonic powers of different degrees of dominance, whilst the Egyptians remained firmly under the grip of an imperial regime.<sup>61</sup> The different political-military environment generated different developmental achievements. That difference caused the ancient Middle Eastern leadership in early civilizations.

Mesopotamian leadership in the early phase of human civilization was despite the fact that Egypt had many natural advantages compared to Mesopotamia. The effects of such differences on innovation and development were rather obvious. Egyptian development began to slow down once the First Dynasty united Upper and Lower Egypt around 3100 BC, while the Mesopotamian civilization retained its momentum much longer. This so-called ancient Middle Eastern leadership in the early phase of human civilized history was from ca 3500 to 1000 BC.

The low relativist concern of Egypt was manifested in the cultural heritage best known to the world: pyramids and the other gigantic monumental buildings and Egyptian arts associated with these buildings. In these areas the Egyptian civilization outdid Mesopotamia, though Mesopotamia has more important heritage

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<sup>59</sup> Refer to Dudley (1991, p. 55).

<sup>60</sup> Refer to Dudley (1991, pp. 54-55).

<sup>61</sup> Hicks (1969, pp. 19-20) refers to ancient Egypt and China as almost perfect imperial orders.

in most other aspects. The amount of resources that the Egyptian Empire poured into such economically unproductive projects showed the lack of concern for relative power and development. Essentially, Egypt could afford to waste its resources on grandeur that would endure through the ages—but in Mesopotamia those resources were used more productively, if less ostentatiously.

As already suggested, a prominent example of the leadership of Mesopotamia over Egypt in early human civilization is the development of laws. According to legal historians such as Morris (1911) and Zane (1927), ancient Egypt is not in the main line of development of laws that the later world inherited. Mesopotamia, in contrast, bestowed upon later civilizations its heritage of laws, including commercial law. The laws developed by Mesopotamia were received and further developed by the Phoenicians, the Greeks and the Romans and came to define the legal framework in use around almost the whole world today. The greater emphasis on economic development by Mesopotamia was very clear.

In sum, Egypt devoted a very high share of its resources to monumental burial buildings and produced no significant law codes. Mesopotamia, on the other hand, produced many law codes of great significance in the development of law. This contrast shows that the Egyptian elite cared more about their afterlife, while Mesopotamian leaders had to worry about rival powers and constantly catered to the needs and interests of important constituencies such as the merchants. The very different attitudes of the leaderships of the two civilizations had a major impact on the development and achievements of their civilizations. Consequently, Mesopotamia produced many great literary works including epics. Yet Egypt, despite its more peaceful and prosperous existence, can boast of no epic literary tradition. Egyptian science and technology were also far less advanced than those of Mesopotamia.

## 4. Chariots and Iron

Horse-drawn war chariots started to be used around 1700 BC. War chariots gave a significant military advantage to nomadic peoples, as exemplified by the Hittite sacking of Babylon in 1595 BC. The adverse shift in battlefield advantage against the settled agrarian civilizations, and in favor of the nomads, ushered in a dark age of approximately two centuries.

Then iron was introduced into warfare. The iron weapons were much cheaper than those made of bronze and therefore were widely available to the nomads. The nomads thereby gained further military advantage versus settled civilizations. Starting around 1250 BC, there was another period of destruction. The waves of attacks by nomads against the ancient civilizations took place

around 1250-1150 BC, including the famous raids by the “Sea Peoples”. The Trojan War immortalized by Homer in *The Iliad* was one of these raids.<sup>62</sup>

All ancient civilizations suffered from nomadic invasions and quite a number of them completely collapsed. From around 1700-1400 BC, nomadic invasions destroyed the Cretan and Indus civilizations. Hyksos armed with composite bows and horse-drawn war chariots defeated the copper-armed Egyptian infantry ca 1600 BC, whilst ca 1400 BC, Mycenaean raiders invaded Greece. Greece was again invaded around 1200 BC by Dorians, leading to the so-called Greek Dark Age. Nomadic conquests led to Hyksos rule in Egypt and Kassite rule in Mesopotamia.<sup>63</sup> Further to the east, in India, Aryan invasions destroyed the Indus civilization, which was never rebuilt.<sup>64</sup> In China, nomadic chariot warriors conquered the Yellow River valley and established the Shang dynasty (1525-1028 BC).

The nomads built empires with their horse-drawn war chariots and used these vehicles to extend the reach of their empires. Due to the more mobile war chariots and the more battle effective iron weapons, an international political system comprising the whole Middle East emerged. The geopolitically isolated and distinct systems of the first civilizations of Mesopotamia and Egypt were subsumed under this new larger system.

These changes especially had great effects upon the Egyptian civilization. The invention of war chariots led to the 1640 BC Hyksos invasion of Egypt. Bronze weapons, war chariots, composite bows, and scale armor were among the weaponry used. Only in 1531 BC did Egypt manage to expel the Hyksos. For the once-isolated Egyptian Empire, from then on, there were more contacts with external influences. Responding to the new international political and military environment with its more mobile and more decisive kind of warfare, Egypt expanded into Nubia and the Levant for control of more resources and forward defense.

This expansion of the Near Eastern system occurred during the era of the Hittite and Middle Assyrian Empires (1595-1000 BC). The major powers were the New Kingdom of Egypt, the Hurian Kingdom of Mittani (which controlled present Syria and Lebanon), the Hittite Kingdom of Hatti (which controlled central Anatolia (modern Turkey)), the Assyrian state (present central Iraq), the Babylonians (based in present southern Iraq) and the Kingdom of Elam (which controlled present southwestern Iran).

The Greater Near Eastern international political system had a fragmented and open geography with multiple core areas, as the new technology of

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<sup>62</sup> Refer to Sandars (1978, pp. 190-191).

<sup>63</sup> Refer to Stavrianos (1982).

<sup>64</sup> Refer to McNeill (1999, pp. 32-35).

chariots increased the projection capability of military power across geographical distance and vastly expanded the original Near Eastern system. Egypt, once in a separate system of its own, was then included. The geography of multiple core areas caused a rather symmetrical relative combined military economic efficiency. The multiple core areas and open terrain of the new Greater Near Eastern international political system also resulted in a smaller mass factor than what Egypt had previously faced. The new mass factor was smaller than that which had existed in the compact geography of Egypt given the same or even older military technology. Consequently, the distribution of resources and capability within the Greater Near Eastern international political system was quite even. The Greater Near Eastern system was a multi-polar state system most of the time.<sup>65</sup>

The incorporation of Egypt into the Greater Near Eastern state system resulted in a more equal distribution of capability among the constituent states. Hegemonic powers in Mesopotamia were now balanced by the might and resources of the Egyptian Empire. The more even distribution of military capability and resources among the major powers generated greater relativist concern and developmental drive, especially for Egypt which was freed from its geopolitical isolation.

The induction of Egypt into the Greater Near Eastern system also affected the Egyptian power-induced risk attitude. The more equal distribution of capability of the Greater Near Eastern system greatly reduced the extreme risk-aversion of the Egyptian Empire and resulted in a more risk-neutral power-induced risk attitude. Consequently, the Egyptian civilization showed more energy and creativity after its inclusion within the Greater Near Eastern system.

The greater relativist concern and less extreme power-induced risk attitude generated better developmental achievements throughout the region. The second half of the second millennium (1500-1000 BC) was a time of great prosperity and progress for the Greater Near East. Advances were made in many areas. The manufacture of glass, for instance, was a major technological breakthrough. The first examples of glass vessels are found in northern Mesopotamia and dated back to the fifteenth century BC, whilst glazed bricks have been found in the palaces of the Middle Assyrian Kings.

Assyria was among the most prominent power players during this period. The Assyrian Empire was thoroughly based in a military tradition with every facet of the government, both civil and military, fitting the desired mold. Under the successive leadership of powerful kings, the Assyrian military numbered in the hundreds of thousands. This was an immense state capacity in the ancient

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65 Refer to Wilkinson (2004).

world. Assyrian military prowess reached its zenith under Tiglat Pileser III. It was the Assyrians who first made broad use of iron, and thus established Assyria as the most technologically advanced power in the Near East. Enemies who relied on bronze weaponry could be dispatched with relative ease. It was the Neo-Assyrian Empire, with its powerful army equipped with iron weapons that ended the fragmentation of the ancient Greater Near Eastern international political system to establish the first Pan Middle Eastern Empire.

Assyrian achievements were not confined to the political and military spheres. Assyrian architectural, artistic and scientific achievements also reached their apex during this period. The irrigation system created by Sennacherib to redirect mountain spring water and the Khosser River to Nineveh, was first of its kind in the world. Assurbanipal was a scholarly individual who gained mastery of both Sumerian and Akkadian languages, and who could compute complex mathematical equations. Due to his academic interests, Assurbanipal assembled in Nineveh the first systematically collected and catalogued library in the ancient Middle East. Assyrian knowledge of the planets of our solar system led to accurate predictions of solar and lunar eclipses.<sup>66</sup>

The incorporation into the Greater Near Eastern international political system energized Egypt. Though Egypt had constant contacts with Middle Eastern Mesopotamian powers before this period, political-military interactions were insignificant and conquest by one over the other was almost inconceivable. With the involvement in the political military competition of the Greater Near Eastern system, the New Kingdom of Egypt adopted an expansionist policy of forward defense. It was the most powerful player in the Greater Near Eastern System. It conquered Nubia in the south and Syria-Palestine in the north. The main rival was the Hittite Empire. During this period, the concept of "warrior pharaoh" was introduced. Political-military competition with other major players in the Greater Near Eastern system propelled the ancient Egyptian civilization to reach its peak in the New Kingdom Era.

The New Kingdom Era was a period of nearly 500 years of political stability and economic prosperity and is considered the most golden of all epochs of ancient Egyptian history. Egyptian culture reached new heights during this period. A central government was created. This period produced an abundance of artistic masterpieces as testified by the rich store of treasures from the tomb of Tutankhamen (1347 – 1337 BC). The colonization of Nubia secured the largest source of gold in the ancient world. The wealth of the New Kingdom supported tremendous building activity and advances in art and architecture. Ramesseum, a temple to tell the greatness of Ramses II, had a library with 10,000 papyrus

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<sup>66</sup> Refer to Saggs (1991) and Haywood (1997, pp. 44-45).

scrolls. The period also produced the earliest historically attested expression of monotheism in the form of Atenism. The Egyptian economy was extremely rich. Hatshepsut, the third female pharaoh, encouraged trade, sending trade expeditions to Punt (present day Eritrea, Djibouti and northern Ethiopia). Thebes was one of the wealthiest cities in the ancient world.

Within this era of intense political-military competition in the Greater Near East, there were developments in state structure, bureaucracy, law, and market institutions, aiding the governance of the empires and coordination of effort across hundreds of miles. Imperial powers provided infrastructure such as road networks, which assisted traders. Complex arithmetical calculation appear for the first time on tablets from this age, a mathematical achievement to be surpassed only a thousand years later.<sup>67</sup> This Greater Near Eastern state system lasted from 1595 BC to around 700 BC. It survived until the arrival of the Neo-Assyrian Empire, the Neo-Babylonian Empire and then the Persian Achaemenid Empire: empires brought forth by a new military technology, the light cavalry.

## 5. Conclusions

Changes in military technology explain the history of the first civilizations. At the very beginning of written history in Mesopotamia and Egypt and before the invention of metallic weaponry, the economies of scale in warfare were low in both Mesopotamia and Egypt. The small mass factor prevented the consolidation of capability in the hands of the most efficient contestant. Consequently, the first civilizations had city-state systems during the earliest phase of their written history. The competition generated by the city-state systems of pre-dynastic Egypt and Mesopotamia was important for propelling civilization forward.

The introduction of bronze weapons increased the economies of scale in warfare and resulted in major structural changes in international politics of the first civilizations. Egypt was united early under one empire while the Mesopotamian city state system was soon transformed into a territorial state system and thereafter hegemonic powers and empires emerged. After the introduction of bronze weaponry, the complacency and conservatism of the Egyptian Empire which was a stable and almost perfect imperial order contrasted sharply with the creativity and energy of the pluralistic Mesopotamia.

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<sup>67</sup> Refer to McNeill (1999, pp. 35-37, 63-64).

The inventions of horse-drawn war chariots and iron weaponry introduced a more decisive and mobile form of warfare. Consequently, the isolated international political systems of Egypt and Mesopotamia were merged to become the Greater Near Eastern system, together with other adjacent civilizations, such as the Persians and Hittites. The formation of the Greater Near Eastern system due to the new military technology of horse-drawn war chariots and iron weaponry energized the lethargic Egyptian Empire. The political-military competition of the Greater Near Eastern system propelled the ancient civilizations to new heights of achievements.

In sum, the history of the first civilizations fits in well with the main arguments of this book. Major changes in military technology caused structural changes international politics. Such technological and structural changes have great impact on the relativist concern, power-induced risk attitude and economic performance of the constituent states. Specifically, the history of the first civilizations agrees with the main argument that political-military competition propels creativity and civilization, while political and military monopoly breeds complacency and conservatism.