

of humans occurred there: the emergence of farming, of cities, and of empires. It is certain that population movements took place throughout ancient history, but studying them is difficult. While we can say with confidence that the Mongol tribesmen who invaded Iraq in the thirteenth century AD came from inner Asia, we are not so certain about the origins of the Hittites, for instance. Perhaps, as speakers of an Indo-European language, they came from a region north of India and arrived in Anatolia in the early second millennium. But the presumed Indo-European homeland north of India could be a pure phantom, and speakers of Indo-European languages could just as easily have resided in Anatolia from prehistory on, only entering the historical record in the early second millennium. The same is true for so many populations – Sumerians, Hurrians, Sea People, Israelites, and so on – who once were thought to have invaded parts of the Near East. To reprise the earlier metaphor, the Near East is one area of light in a world of prehistoric darkness. When people suddenly enter its spotlight it is often impossible to establish whether they came from far away or nearby – or if they had always been in the region where they first appear in the documentation.

1.4 Prehistoric Developments

We must undertake the study of the long cultural evolution of prehistory from a perspective that takes the entire Near East into account. Despite the great ecological diversity in the region, we see simultaneous developments in several places. The absolute chronology of events is still uncertain and debated, but we have a good idea about overall trends. Especially with the beginning of the Neolithic period around 9000, important cultural developments occurred that established the setting for the later historical civilizations.

The most crucial technological development was agriculture, which made it possible for large groups of people to remain in the same place year-round. The Near East was the first region in the world where agriculture was invented. The process took several millennia and involved the domestication of plants, primarily cereals, and of animals. The archaeological sites where we see these changes happen are usually located at the borders of different ecological zones, whose occupants took advantage of varied plant resources and hunted different animals. The natural variety described above may in fact have been one of the reasons why agriculture evolved so early in the Near East. People became so used to having access to a variety of food resources that they sought to guarantee supplies by interfering in the growing cycles of crops and animals. Moreover, by chance the wild resources available to them were more suitable for domestication than those elsewhere. Harvested wheat and barley can be stored much longer than most African plants, for example.

For millennia, humankind had lived by gathering food locally, and moved when the supply was exhausted. The hunting of animals probably complemented a diet that relied primarily on wild cereals, fruits, legumes, fish, shellfish, and whatever else the environment provided. Their lifestyle should not necessarily be

considered as harsh and difficult. Ethnographic studies show that the life of early farmers was more arduous than that of hunter-gatherers, especially in the resource-rich areas of the Near East, where food could be readily collected without much effort. The question of why people moved toward agriculture thus remains difficult to answer, and the desire to live in larger communities may have been the main driving force. Some prehistoric sites show an amazing willingness to cooperate even before agriculture. The recently discovered site of Göbekli Tepe in southeast Anatolia contains monumental stone structures with images carved on them, which could only have been built by large groups of workers (figure 1.1). These must have come from various foraging communities in the region, who used the location to gather in what can be called religious ceremonies. Permanent settlement made such interactions easier.

Direct control of the food supply via cereal agriculture was achieved through a series of probably inadvertent steps from the eleventh to seventh millennia as humans became more practiced at sowing, husbandry, harvesting, and storage. Wild cereals have two characteristics that cause problems for human consumers – they have weak stems so that their seeds easily disperse and fall to the ground before they are harvested. Also, it is hard to get at their seeds, which are covered with strong husks in order to prevent premature germination. When harvesting, people would gather more seeds that had not fallen to the ground from plants with stronger stems, and they promoted the growth of such plants once their seeds were sown. More consciously, they may have selected grains with thinner husks for sowing, thereby propagating such species. Over many centuries humans genetically modified the cereals through selection and crossbreeding. The einkorn and emmer wheats that grew wild in the Near East mutated to develop into the modern bread and club wheats.

Selective hunting of wild animals also replaced previous indiscriminate killing. People culled wild herds to procure a proper age and gender balance, and protected them from natural predators. Sheep and goats were the most common domesticates, and among them preference was given to breeds that provided the most resources, such as sheep with thick wool coats. Over time, humans became responsible for all aspects of the animals' existence, whose behavior had now totally diverged from that of their wild progenitors and whose physical attributes had become very different as well. Sheep developed long hair that could be turned into thread for weaving. Domesticated dogs ate cereals, something their wild ancestors would never have done. The human body changed as well. For example, some people developed the enzymes needed to digest unprocessed animal milk.

Thus there was not a sudden change from hunting-gathering to farming, but rather a slow process during which people increased their reliance on the food they grew, but still supplemented their diets with wild resources. It is clear that the process was not irreversible. Sometimes populations had to return to a hunter-gatherer existence or increase their intake of wild resources when the domesticated supply did not meet their needs. We have to keep in mind that both lifestyles existed in the same geographical area: agriculture developed where wild resources were abundant.

Agriculture enabled people to stay in the same place for long periods of time. The various archaeological cultures we distinguish between the years 9000 and 5000 exhibit a greater permanence of residence and larger communities. The house is the attribute of sedentary life that is most recognizable in the archaeological record. In the Levant, houses were built of stone or with stone foundations; elsewhere in the Near East their walls were of piled mud, and later of mud brick. The settlements became increasingly large, which demonstrates the ability to feed greater numbers of people. A shift from round to rectangular houses took place in the ninth millennium, and it shows that larger groups of people cohabitated with some type of social hierarchy and a specialization in room use. In the earliest villages of the ninth millennium, people used clay storage bins to keep wild and domesticated cereals, but in the seventh millennium they developed fired pottery. Although perhaps not a major technological breakthrough, since it was merely an extension of earlier storage practices and work with clay, it facilitated cooking and enabled the safe storage of goods. Coincidentally, pottery provides the archaeologist with an extremely useful tool for dating excavated remains, in part because it was a constantly developing technology (see box 1.2).

By 7000, completely agricultural villages existed throughout the Near East, all of them located in areas with sufficient rainfall for farming. The focus of subsequent technological developments shifted at this time to the east, especially the region below the dry-farming area, that is, the plains of Mesopotamia. Shortly after 7000, farming communities developed in areas of northern Mesopotamia that had insufficient rainfall and needed to rely on irrigation. The technology of leading water from rivers and basins to crops had already been used much earlier in areas such as the Levant, but with the move of settlements into arid zones, irrigation became essential. There was a radical change in the farmers' interactions

Box 1.2 *The use of pottery in archaeological research*

Ceramic remains provide an important tool to the archaeologist. Pottery is ubiquitous in the archaeological record, the shards are almost indestructible, and styles of decoration as well as pot shapes change relatively rapidly over time, indicating the tastes of distinct groups of people. Just as in our day the shape and decoration of soda bottles develop over time and we can date a photograph by the bottle in a person's hand, so the changing styles of pottery in antiquity can be used as a way of dating sites and the archaeological levels within them. Consequently, prehistoric cultures are often named for the type of pottery that represents them: Hassuna, Samarra, Ubaid, and so on, whose pottery styles were first identified in the sites with those names (see figure 1.2). When several ceramic assemblages are found in a stratigraphic sequence, we can establish their relative chronology. All *tells* of the Near East are covered with potsherds that represent the periods of occupation. Thus even without excavation, the archaeologist can determine when a site was inhabited on the basis of pottery remains.

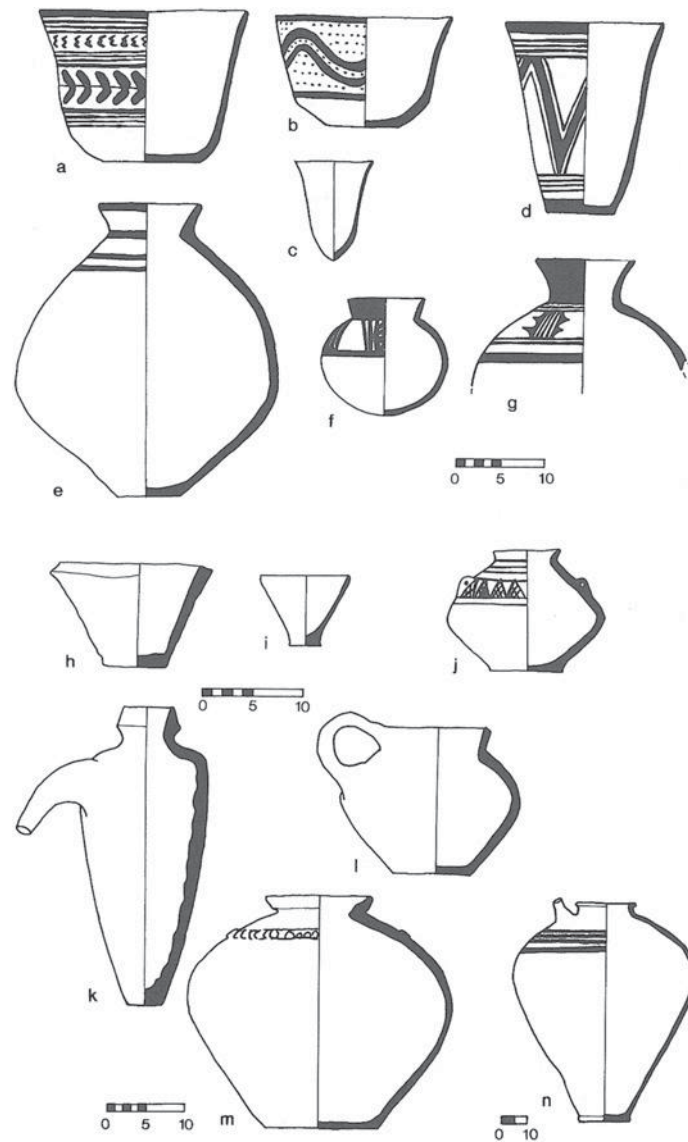


Figure 1.2 Pottery sequence. Pottery shapes and decorations can differ drastically between different archaeological cultures, standing out as markers of their identity. In the southern Mesopotamian sequence the painted Ubaid pottery (a–g) is very distinct from the sober Uruk vessels (h–n) that replaced it, but on the other hand, the later potters experimented with new shapes. Credit: S. Pollock, *Ancient Mesopotamia: The Eden that Never Was* (Cambridge: Cambridge University Press, 1999), p. 4. After Neely and Wright 1994, fig III.5c,f, III.4a,h, III.7d,f, III.8b,c; Safar et al. 1981, 74/8, 80/1, 9. Author originals courtesy of S. Pollock.

with natural crops. While previously they had promoted the growth of cereals that also existed in the wild, they now introduced them into areas where they were unnatural and depended fully on human support. The challenges they faced in Mesopotamia were great. Unlike the Nile in Egypt, which provides water in the late summer just when it is needed to prepare wet fields for planting seeds, the Tigris and Euphrates rivers rise in the late spring when too much water can destroy the almost full-grown plants. The rivers are at their lowest when the sowing season arrives, and farmers had to build canals and storage basins to control the water and allow it to enter the fields only when needed. The system did not have to be elaborate and small communities could manage it, but still there had to be an awareness of the cycles of the rivers and the crops, and planning and organization were required to irrigate using the Mesopotamian rivers.

Small irrigation systems first appeared in the foothills of the Zagros, and probably also near the marshes in southern Babylonia. The technology had to be further developed, however, before it could be extended into southern Mesopotamia, where the extreme flatness of the plain exposed fields to floods, especially from the Euphrates, which has almost no valley at all. The river, with its many branches and man-made canals, had to be carefully managed and farmers did not only have to lead water to the crops but also protect them from too much water. Any time a river branch overflowed, a natural levee developed from the deposit of silt left behind by the water losing its speed. While levees could be reinforced artificially and turned into dikes, sedimentation often caused riverbeds to be higher than the fields around them. There was no natural drainage of water deposited in the fields, and the hot climate led to evaporation and a high level of salt in the soil, arresting the growth of plants. Moreover, the water table rose after irrigation, damaging roots when it came too near the surface. Yet, over the millennia inhabitants of Babylonia developed the technology to irrigate increasingly larger areas. While irrigation agriculture became the characteristic feature of economic life in the region in later periods profiting from the high fertility of the soil, its potential alone did not encourage people to settle there. The remarkable abundance of resources in the marshes – reed for buildings and animal fodder, fish and other animals for food – also played a crucial role. The ecological diversity had a great appeal. Between 6000 and 5500, permanent settlement in the lower Mesopotamian plain became common and remained a constant feature.

Primarily on the basis of pottery styles, archaeologists delineate a sequence of Near Eastern cultures in the period from 7000 to 3800: Proto-Hassuna and Hassuna in the rainfed areas of northern Mesopotamia in the seventh millennium, and Samarra in the irrigated zone of the north in the late seventh millennium. A less-developed culture identified as Amuq B characterized the west of the Near East at the time. The sixth millennium saw a massive expansion of the north Mesopotamian Halaf culture that ranged over the entire rainfed zone abutting the Mesopotamian plain and extended into the Levant. At the same time southern Mesopotamia became permanently settled by people using a cultural assemblage we call Ubaid. Around 4500, this Ubaid culture replaced the Halaf in the north and in the Zagros Mountains.

Chart 1.1 Chronology of the prehistory of the Near East

date BC	Levant	Anatolia	N. Mesopotamia	S. Mesopotamia
9000		Göbekli Tepe		
	Proto-Neolithic (PPN A)			
8500				
	Aceramic Neolithic (PPN B-C)			
7000				
	Pottery Neolithic		Proto-Hassuna	
6500		Chatal Hüyük		
	Amuq B		Hassuna/Samarra	
6000				
	Halaf	Halaf	Halaf	Early Ubaid
5500				
5000				
4500	Ubaid	Ubaid	Ubaid	Late Ubaid
4000				Early Uruk
	Chalcolithic			
3500			Uruk	Late Uruk

The most remarkable aspects of these cultures are their wide geographical coverage and their long-distance contacts. Keeping in mind the fact that these were small communities without any organization beyond the village level, the spread of a cultural assemblage such as that of Halaf from the central Zagros to the Mediterranean coast is astonishing. There are limited remains and local differences are blurred, but aspects of Halaf's material culture are quite specific, such as the unique layout of its houses and terracotta figurines (figure 1.3). Moreover, we observe that luxury materials traveled enormous distances. For instance, obsidian was only naturally available in central Anatolia, but it was found in sites throughout the Near East. Archaeologists often think that the success of Chatal Hüyük, a large site in central Anatolia that existed from ca. 7200 to 6000, resulted from its trade in this volcanic stone. Less prestigious goods were obtained in distant regions as well. Ubaid pottery produced in southern Mesopotamia appeared along the Persian Gulf as far south as Oman, and scholars have interpreted this as the remains of fishing and pearl-diving expeditions.

Another characteristic of these early cultures is their longevity. The Halaf culture lasted almost a thousand years and gradually gave way to that of the southern Ubaid. The latter's durability over almost two millennia, and the high degree of cultural continuity it demonstrates, are startling. These factors seem to suggest that once communities had settled in lower Mesopotamia, they retained a stable and local development. They preserved the same material culture throughout their existence, only gradually becoming more extensive and complex.



Figure 1.3 Figurines of women from the Halaf culture. These terracotta figurines representing headless women whose breasts and thighs are exaggerated are typical for the Halaf culture, which spread across northern Mesopotamia and Syria. These figures are usually associated with fertility and childbirth. Louvre Museum, Paris. Left H: 8.3 cm, AO 21095; Right H: 6.3 cm, AO 21096. c. 6000–5100 BC. Credit: akg images/Erich Lessing.

Primary among the social developments were the rise of a hierarchy and the centralization of powers and functions, a result of the growth in size of communities. There are fundamental differences visible between the north and the south of Mesopotamia in this respect. In the southern Ubaid culture, some members of the communities had a distinct status, as is indicated by the larger size and the particular layout of the buildings they inhabited or supervised. The power of these newly developed elites seems to have derived from control over agricultural resources. Among the families that made up communities, one would emerge to administer the storage of harvests in a central location. This is already visible in the south, whereas the contemporary Halaf culture in the north exhibits a high degree of social homogeneity. When the Ubaid culture spread into Halaf territory after 5500, social differentiation arrived there as well. The new elites are visible to us in their claim to rare and exotic foreign goods. Possibly they were immigrants from

the south who imposed a type of political authority over the weaker local families and controlled long-distance trade. Only late in the Ubaid period did they start to exercise the type of local agricultural dominance visible earlier in the south.

The physical focus of these centralized functions seems to have been a building that may already be called a temple. Starting in the mid-sixth millennium, the site of Eridu near the Persian Gulf shows a sequence of increasingly larger buildings on the same spot, culminating in a great temple of the late third millennium. Projecting the function of early historical temples back in time, it is likely that from the early Ubaid period onward, this building functioned both as a communal place of worship and as a center for the collection and distribution of agricultural goods. Some of Eridu's archaeological levels contained masses of fish bones, which seem to be the remains of offerings made to the deity. A social organization beyond the individual household was thus developing within communities, with all families of the settlement contributing to the temple cult. There also developed a hierarchy of settlements in the far south of Mesopotamia, a few measuring 10 to 15 hectares (25 to 37 acres) surrounded by smaller ones that were usually only 0.5 to 2 hectares (1.2 to 5 acres) in size. This demonstrates that individual communities became integrated into a wider cooperative territorial organization.

The prehistoric evolutions very summarily sketched here demonstrate that many of the cultural aspects of later Near Eastern history evolved over long periods. A culmination of these processes occurred in the fourth millennium, when the coalescence of several innovations led to the establishment of Mesopotamian civilization. We will discuss these events in more detail in the next chapter.

Debate 1.1 *Dating Near Eastern history*

Following the practice of almost every other history, this book uses absolute dates to indicate when events took place. These dates are set within the artificial construct of the Christian or Common Era, and since the entirety of ancient Near Eastern history took place before the start of that era, all are B(efore) C(hrist) or B(efore) C(ommon) E(ra), the higher numbers preceding the lower ones. That is merely a convention to enable us to comprehend the sequence of events and their distance in time, even if the era has an ideological basis without relevance to the ancient Near East. All dates in this book thus have to be read as BC, except when AD (*Anno Domini*; alternatively CE) is added explicitly.

The numbers give a false impression of certainty, and the absolute chronology of Near Eastern history is a vexing and controversial problem. The Mesopotamians were pretty good at documenting sequences of rulers, although sources can differ on the number of years a king ruled and other details. For absolute chronology the biggest difficulty is to establish a firm point in time to which the king lists can be attached. The tools employed derive from multiple disciplines (e.g., astronomy, archaeology, philology) and the scholarly debates are very technical. First-millennium chronology is secure because of several reliable data, including the king list in Greek compiled by the astronomer Ptolemy of Alexandria in the second century AD, which goes back to 747 BC, and the record of a

solar eclipse that took place on June 15, 763, which allows us to anchor a long sequence of Assyrian eponyms (see chapter 6). But uncertainty emerges in the early centuries of that millennium and becomes worse for the second millennium and before. Scholars have reconstructed an accepted relative sequence, primarily based on Assyrian and Babylonian lists of kings, but that sequence cannot be absolutely dated with confidence. In 1912 AD one scholar thought he had discovered solid astronomical evidence in a record of the appearances and disappearances of the planet Venus during King Ammisaduqa's reign, reported in an astrological omen list preserved in a manuscript of the seventh century BC. The planet's behavior fits several moments in the early second millennium BC, and after scholars floated many suggestions three systems were considered the most likely: the long, middle, and short chronologies. They dated the reign of the most famous king of the period, Hammurabi of Babylon, in 1848–1806, 1792–1750, and 1728–1686 respectively, and the end of his dynasty in 1651, 1595, or 1531 (see Garelli et al. 1997: 225–40; Eder and Renger 2007: 8–9; and Pruzsinszky 2009: 23–30 for surveys of the scholarship). In the 1950s most scholars began to adhere to the middle chronology, which also determined the absolute dating for third millennium events and before.

The deceptive certainty has come under attack for some time now. Doubts about the reliability of the information in the *Venus tablet of Ammisaduqa*, written a thousand years after the events it describes, arose when the tablet was reedited (Reiner and Pingree 1975), and some have suggested it should be ignored altogether (Cryer 1995: 658), although there has been a recent defense of its merits (Mebert 2010). Spurred by concerns that the 1595 date for the fall of Babylon assumes a much too long Dark Age in the middle of the second millennium, a major reinvestigation of archaeological, textual, and astronomical evidence forcefully argued for an ultra-short chronology and placed the event in 1499 (Gasche et al. 1998). This has inspired an avalanche of new studies, incorporating such evidence as tree rings from Anatolian buildings, historical references in omens, the incidence of solar eclipses, and so on (see Pruzsinszky 2009 for a detailed survey of all evidence), but in the end there is no certainty. The Middle Chronology remains thus “too convenient to discard” (Roaf 2012: 171), advice I follow here to make it easier for readers of this book to consult other scholarship.¹

¹ The absolute dates I use for Assyrian and Babylonian history come from a list Regine Pruzsinszky prepared for Gonzalo Rubio, ed., *A Handbook of Ancient Mesopotamia*, de Gruyter (in press).