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THE NEOLITHIC AND CHALCOLITHIC PERIODS

1 The earliest experiments in food production

In order to trace the development of cultural elements and regional differences influencing the history of the Ancient Near East, it is necessary to start from what has been defined as the ‘Neolithic Revolution’ (Gordon Childe) (Table 3.1). In this case, the term ‘revolution’ does not indicate a sudden change, but a radical change within the socio-economic structures of the time. However, this change, which took place over a couple of millennia, was relatively fast compared to the previous two and a half million years of hunter-gathering activities.

The main characteristic of the Neolithic Revolution was the progressive development of food production techniques (agriculture and farming), gradually overtaking foraging activities, such as hunting and gathering.

Table 3.1 Chronology of the ‘Neolithic Revolution’

	General definition	Palestine	Syria	Taurus	Anatolia	Kurdistan	Luristan	Khuzistan
15,000								
	Intensive hunter-gathering activities	Kebara				Zarzi		
10,000								
	Incipient food production	Natufian (10,000–8500 BC)			Pre-ceramic Hacilar (7500–7000 BC)	Zawi Chemi Shanidar (9000–8000 BC)	Ganjdareh Asiab (8000–7500 BC)	Bus Mordeh (7500–6500 BC)
		Pre-Pottery Neolithic A (8000–7300 BC)				Kamir Shahir (7500–7000 BC)		
7000								
	Pre-Pottery Neolithic	Pre-Pottery Neolithic B (Jericho) (7000–6000 BC)	Pre-Pottery Neolithic B (Mureibet) (ca. 6500 BC)	Çayönü (7500–6500 BC)	Pre-ceramic Çatal Hüyük 6000	Pre-ceramic Jarmo (6500–6000 BC)	Tepe Guran (6500–6000 BC)	Ali Kosh (6500–6000 BC)
		Beidha (7000–6000 BC)	Buqros, el-Kom (6500–6000 BC)	Hüyük				
6000								

Unfortunately, the initial stages of this process are still under speculation and remain largely unknown. The traditional features of Neolithic societies, such as their agro-pastoral activities, the sedentarisation of village communities, and pottery production are considered inseparable and largely contemporaneous. However, these traits need to be re-examined when considering the Near East. This area provides contemporary evidence for both intensive harvesting and the initial phases of production processes, and non-sedentary agriculture and Neolithic communities where pottery was still unknown. Moreover, the so-called 'Broad-spectrum Revolution' (L. Binford) of the Upper Palaeolithic period, when resources were gathered through specialised hunter-gathering techniques, may have preceded the formation of these typically Neolithic features.

Since the earliest evidence for these changes comes from the Near East, the varying degrees of development in the area, through stages of trial and error, can be explained. Looking at the history of the Near East, it becomes possible to catch a glimpse of the variety of strategies put forward by different communities in different environments, even when they were relatively close to each other (both geographically and chronologically). In this period, then, communities with different degrees of technological and economic development coexisted. This is mainly known from radiocarbon evidence. Comparative stratigraphic and typological reconstructions tend to minimise regional developments, interpreting the presence of similar features in different communities as an indication of their contemporaneity in time.

In this regard, interfacing regions, located in-between eco-zones, appear to have been the most successful in testing innovative techniques. The earliest communities developing food production techniques were located right outside the border of the Fertile Crescent, along an arch stretching from Palestine to the foothills of the Taurus and Zagros Mountains, and reaching Khuzistan. Successively, in the seventh millennium BC, the great ceramic cultures of the Neolithic period either spread to the Lower Mesopotamian plain, or established their presence in the Anatolian and Iranian plateaus. Mesopotamia (as well as Egypt) only gained a central role in the process around the fourth millennium BC. This centrality would characterise Mesopotamia throughout the later stages of its history, especially in relation to its own 'periphery'.

The Levant and the Anatolian and Iranian foothills were particularly suitable regions for the Neolithic Revolution. These areas were all characterised by ecologically stable and well-protected niches (valleys and intermontane basins) suitable for the socio-cultural phenomena of the time, which benefited from close contacts between different ecosystems. This interaction facilitated the exploitation of different resources and the seasonal movement of human groups for farming and agricultural needs. Overall, bearing in mind that from 10,000 BC the climate became warmer and more humid than before, these were rainier zones, mainly characterised by herbaceous zones with sparse forests (with oak and pistachio trees). In these areas, the plant and animal species that would be at the centre of the Neolithic Revolution (such as cereals, legumes, goats and sheep) grew naturally.

The previous period (ca. 15,000–10,000 BC), corresponding to the Epipaleolithic Age in the periodisation based on stone production, has been considered a time of intensive hunting and gathering activities (R. Braidwood). Settlements were still made of shelters for small communities of forty to fifty people, whose mobility in the territory followed the animals at the centre of their diet. Survival was a daily issue, since there were no techniques for food production or for its conservation. Hunting was mainly focused on smaller species than those hunted in the Palaeolithic: gazelles in Palestine, sheep in the Zagros and goats throughout the area. People began to practise a more specialised type of hunting, focused on the selection of species to be removed in order not to weaken wild herds. In this way, communities began to control herds without farming them in full.

Gathering activities, especially of cereals and legumes, also intensified and became increasingly specialised, causing, albeit involuntarily, the first effects of human selection and diffusion of certain plants. Therefore, basic concepts of food production were laid down through an increased knowledge of the most effective practices for the exploitation of the land. Nomadism became more confined, since it depended on the availability and location of resources. At times (such as in the case of lake fishing or even in areas with a large concentration of wild cereals) these aspects facilitated the development of a sedentary lifestyle. The

large and roughly cut Palaeolithic stone tools were abandoned in favour of geometric microliths used for specific purposes, such as pestles to grind cereals.

The main cultures of this phase were the ones at Kebara in Palestine and Zarzi in Iraqi Kurdistan. It is there that the first innovative processes appeared, opening up a new phase of development in the Near East. While in the Zagros area small, mobile communities mainly focused on the domestication of sheep and goats, in the Levantine and Taurus areas larger and more settled communities brought about the domestication of cereals.

The critical phase of this development, called the era of 'incipient food production' (R. Braidwood), took place between 10,000 and 7500 BC. Some species of small ruminating mammals, already the object of specialised hunting activities (in 10,000 BC the dog was already domesticated for hunting and guarding purposes, and not as food), became an increasingly important part of a sort of human-animal symbiosis. This close interaction, however, only worked with certain species (for example sheep and goats), which would eventually be domesticated, but did not work with other species (for example gazelles), which continued to be hunted. This 'symbiosis' and early phase of domestication brought about the systematic use of milk and fell (and eventually of wool), the selective killing of male animals, and the protection and guiding of herds (which by now had become human property) to seasonal pasturelands.

These animals began to experience morphological changes, allowing us to recognise their domestication from bone remains and from the assessment of their age and gender. Naturally, physical changes in these animals only appeared after long periods of domestication. Therefore, they are very difficult to recognise in the earliest phases of this process. The same is true for the domestication of cereals (mainly spelt wheat, emmer in Syria and Palestine, einkorn in Anatolia and Iran) and legumes (Figure 3.1). The continuous harvesting of wild cereals and the subsequent concentration of the discarded seeds around settlements must have led (following observations on their life cycle) to the first experiments in cultivation. This happened through the delimitation of the 'cultivated' space, protecting it from animals. Even in the case of cereals and legumes, domestication caused considerable morphological changes and genetic mutations, which remained incomplete in the earliest stages. Therefore, this type of early agriculture was a sort of 'cultivation of wild plants'.

Already in its incipient phases (10,000–7500 BC), this new mode of production had a visible impact on the social structure of human groups and the organisation of resources. Communities began to build round-houses, partly set in the ground and with a tent-shaped roof. Therefore, the earliest permanent base-camps appeared (particularly where the first attempts at cultivation also took place), alongside seasonal camps for hunting purposes (which remained a fundamental activity) and other seasonal activities. The appearance of the first silos for the conservation of food and seeds from one year to the next indicates how these communities had by now overcome the daily dimension of nutrition. Moreover, herds and camps also raised the issue of property and inheritances. This led to the development of tombs, either for individuals or family groups.

This incipient food production era mainly corresponds to the Natufian culture and then the Pre-Pottery Neolithic A in Palestine (and in Syria up to the Middle Euphrates). It also appeared in the Zagros foothills in sites such as Zawi, Chemi and Shanidar, and then in Kamir Shahr (Kurdistan), Ganj Dareh and Asiab (Luristan) and Bus Mordeh (Khuzistan). There are considerable chronological differences between these sites, since the Palestinian sequence seems to pre-date the one in the Zagros. There are also ecological differences, such as the presence of sheep in the Zagros and not in the Syro-Palestinian area.

Stone tools also varied, though they were still geometric microliths designed for specific purposes, such as arrowheads for hunting, flint-bladed sickles for harvesting cereals and burins. Tools were also built from other materials, such as bone, used for fishing hooks and harpoons. While at the beginning of this phase communities still relied on specialised hunting activities and the intensive harvesting of wild plants, by the end of this period (the Pre-Pottery Neolithic A) we have the first concrete evidence for cultivation. The discovery of einkorn and wild spelt wheat in Mureibet, in the Middle Euphrates, indicates the development of agricultural activities because they are found outside their natural habitat. This is also the case for emmer and spelt in Jericho and Netiv Hagdud, in the Jordan Valley. Soon after, the avail-

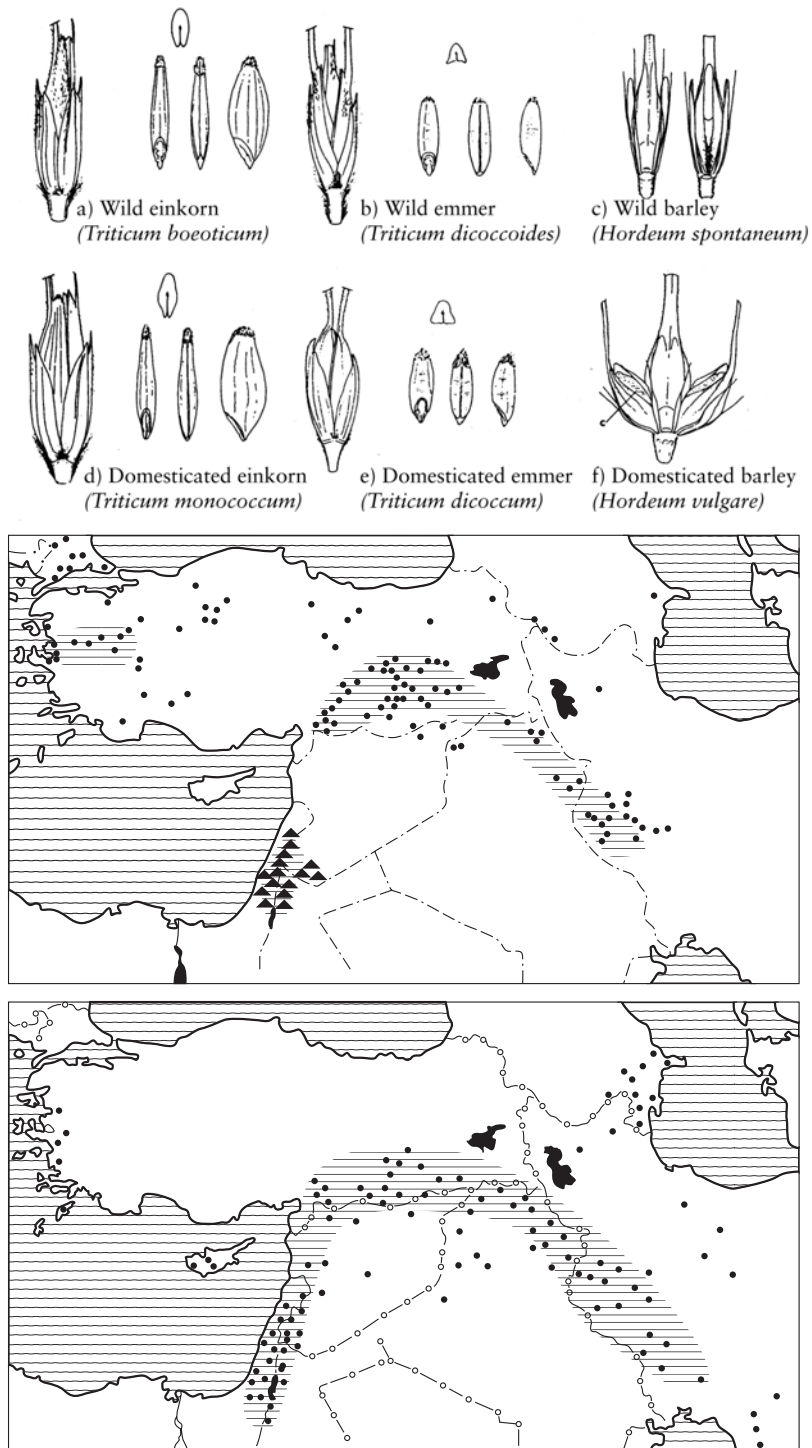


Figure 3.1 The origins of agriculture. Above: Morphological changes in cultivated crops; Centre: Original habitat of wild einkorn (•) and emmer (▲); Below: Original habitat of wild barley.

able evidence clearly shows the first domestication of sheep and goats in many areas of Khuzistan and Kurdistan.

A clear periodisation of this phase is evidently difficult, due to the geographical variations and the different pace of development of these phenomena. Nonetheless, the phase between 8000 and 7000 BC can be considered fully Neolithic. Sedentary village communities began to have between 250 and 500 inhabitants, rectangular mud-brick houses, and an economy based on agriculture and the farming of sheep, goats and pigs (and cattle by the end of the period). These kinds of groups are mostly found in the Pre-Pottery Neolithic B in Syria (Mureibet, Buqras), Palestine (Jericho, 'Ain Ghazal), the Taurus foothills (Çayönü, Cafer Hüyük, Nevali Çori), Kurdistan (Jarmo), Luristan (Tepe Guran) and Khuzistan (Ali Kosh).

From a social point of view, the introduction of a rectangular plan for households is an important change. While the circular plan, which could not be easily enlarged, indicated a family structure that could not be expanded, the rectangular plan allowed the construction of extensions to the main plan. This allowed the development of a series of interlinked buildings surrounding a courtyard, or of more complex plans (see Can Hasan III in Anatolia and Buqras in the Middle Euphrates), or even larger buildings with stone foundations (see Çayönü). There is also evidence for increased cooperation between families in this period, a case in point being the fortification walls and towers at Jericho. The ownership of means of production, such as land and herds, and its hereditary transmission thus began to have a considerable impact: communities become larger, expanding from the 2000 to 3000 m² of the Natufian period to the 2 or 3 ha of the Pre-Pottery Neolithic A and B.

The Pre-Pottery Neolithic B also provides the first clearly ideological (i.e. religious) expressions of a patriarchal structure, from the skulls of dead ancestors whose features had been moulded in clay or chalk (at Jericho and other Palestinian sites), to the statuettes from 'Ain Ghazal. However, the imposing cultic buildings from the Taurus foothills (one at Nevali Çori, and a whole complex at Göbekli, near Urfa) constitute the most impressive evidence. They were characterised by a round or rectangular plan, polished floors, and anthropomorphic steles, which indicate the practice of ancestor cults. From the same period, we have evidence for houses built on robust substructures (possibly to separate the harvested crops from the ground), and specifically designed for family units living in larger villages (for instance, at Çayönü, north of Diyarbakir). Naturally, alongside these more advanced settlements, there were still less economically developed groups living in more difficult areas, such as Beidha in Jordan, a sedentary village that continued to subsist on hunting. Similarly, many sites in the Negev and Judaeen Desert continued to be seasonal camps for hunters.

This phase also experienced a significant development in interregional contacts, visible from the spread of obsidian from Anatolia and Armenia, and seashells from the Mediterranean, the Red Sea and the Persian Gulf. In this way, the Neolithic era of the Near East began to take form. Village communities began to produce their own food, though in varying degrees according to the type of resources available or their degree of technological development. These communities also interacted with each other through the exchange (also over long distances) of small, valuable materials.

The issue of the 'causes' leading to the shift from hunter-gathering to food production (the latter requiring a considerable increase in the amount of work needed) cannot be solved with a single answer (and certainly not here). The multiple causes and effects, and independent and inter-dependent factors, undoubtedly contributed to this change. However, all these factors are difficult to estimate in terms of their impact, due to the lack of evidence and the breadth and duration of the phenomenon. Nonetheless, the idea that the main cause of this change was the dramatic rise of the population cannot be accepted: both in the phase of intensive and specialised hunting and gathering, and of incipient food production, communities were small enough to be able to survive with the resources available to them. Regarding the climatic and, consequently, ecological changes mentioned above, they constitute more the framework of this technological and economic change, rather than its cause. In fact, different communities could have reacted to these changes in different ways, and it is this variety of possible choices and strategies that characterises human history.

Be that as it may, there are two main factors worth bearing in mind: a temporal and a spatial one (Figures 3.2 and 3.3). In terms of time, the desire to maintain a durable system for the procurement of food made cultivation,

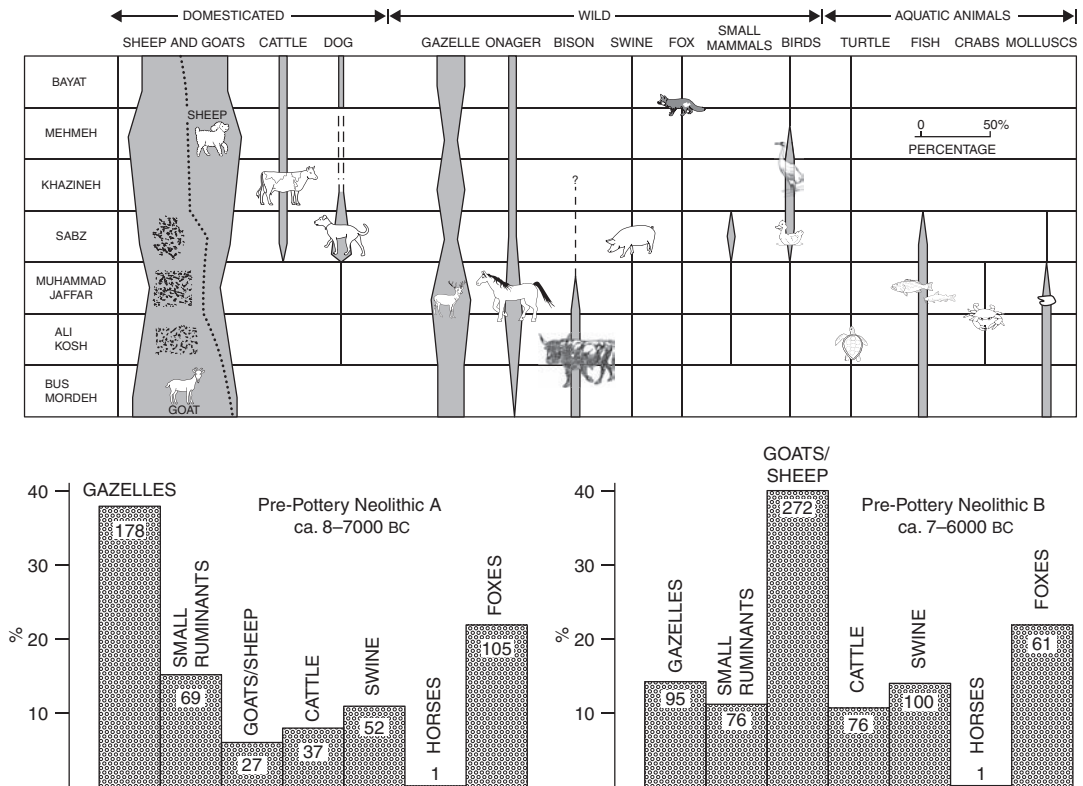


Figure 3.2 The beginnings of farming. *Above:* The distribution of animal remains in prehistoric Khuzistan (from the Bus Mordeh phase, ca. 7500–6500 BC, to the Bayat phase, ca. 4000 BC). *Below:* The transition from Pre-Pottery Neolithic A to B in Palestine saw a marked decline of wild species and a marked increase of sheep and goats.

the management of herds, food storage, and sedentarisation effective means for the development of a long-term solution for the management of food resources. In terms of space, the movement of human groups across different ecosystems led many resources and means of production, which grew naturally in one area, to be transferred to another area, allowing the development of new techniques. These factors heavily influenced the availability of resources, leading to the rise of more stable and interacting communities. These communities thus began to actively change cycles for reproduction and consumption rather than being influenced by them.

2 The Neolithic period

By the end of the eighth millennium BC, the Near East (from the Fertile Crescent to Anatolia) had already developed the basic technological advances characterising the Neolithic period: households, base-camps, village communities, the cultivation of cereals and legumes, and the farming of goats, sheep, pigs and cattle. Other typically Neolithic techniques also rose to prominence in the area. For instance, there was the rise of textile production (mainly wool and linen) for clothes, worn instead of fells, and pottery (which first developed in the Zagros area, at Ganj Dareh and Tepe Guran), crucial for the conservation of food. In addition to that, some areas began to create tools out of hammering copper, especially at Çayönü, located close to the large copper ores at Ergani Maden.

By the first half of the seventh millennium BC, however, at the peak of this important cultural development, archaeological evidence becomes more difficult to find. This gap in the evidence might not have

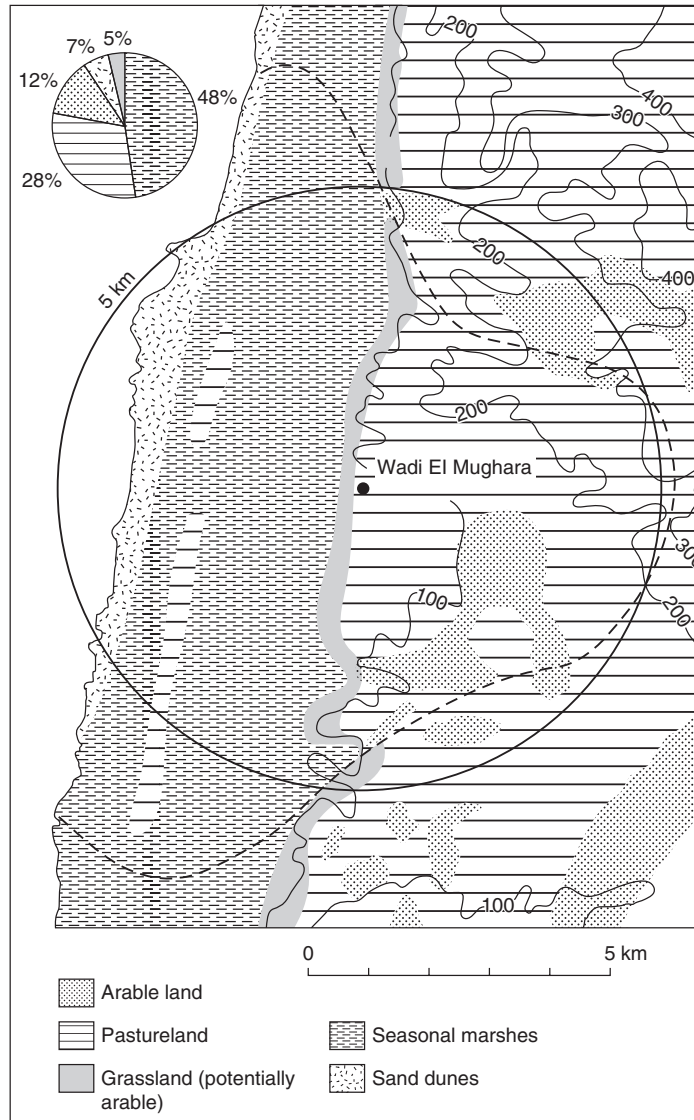


Figure 3.3 Example of a site-catchment analysis in a Natufian site. The dotted line delimitates the area that could be reached in an hour on foot.

been accidental, and could correspond to a real population crisis throughout the Fertile Crescent. The interpretation of this crisis as a result of climatic changes (such as severe drought) is purely hypothetical. However, it is clear that a demographic and cultural development of this scale could not have been an easy and unstoppable process, but a difficult one, liable to backlashes and in need of constant re-adaptations.

The revival after this critical phase laid down the foundations for a visible demographic and technological development. From 7000 to 5200 BC, fully Neolithic cultures rose to prominence, with periods of great prosperity. This was due to the spread of those techniques, initially developed in the Anatolian highlands, in the Iranian plateau and Mesopotamia. These areas began to implement the new agro-pastoral techniques, with the deforestation, drainage and irrigation of the land. Therefore, they were suddenly

able to provide a significantly larger space for farming and agriculture compared to the original mountain niches. For this reason, a uniform view of the Near Eastern Neolithic period presents considerable difficulties, overshadowing the progressive pace of technological development, regional variations, differences in production strategies, the degree of experimentation and the slower pace of marginalised areas. Nonetheless, as an introduction to the history of the Near East, this period has to be considered here as a large-scale phenomenon, defining the Neolithic period in its most characteristic features.

Agriculture and farming were the main sources of economic growth, based on a drastic selection of domesticated plants and animals. Among cereal crops, spelt, emmer and einkorn (plants belonging to the wheat family) became the most commonly grown. In this regard, there were already regional variations and preferences in cultivation that would become more marked in the following periods. These grains were now fully domesticated and their appearance in the alluvial plains owes much to the earliest irrigation techniques. Artificial irrigation, in oases (Jericho), or through drainage and the construction of canals in the alluvial plains (Eridu), or in the plateaus (Çatal Hüyük), was first implemented in this phase. This intervention ensured the availability of water and distributed it throughout the year. Irrigation, hybridisation and selection (at times involuntary) produced visible morphological changes. Diets were integrated through the consumption of legumes, while, among the 'industrial' plants, linen became increasingly widespread. Alongside agriculture, a substantial part of the diet was still provided by the harvesting of those wild plants that were not yet domesticated, but were still regularly consumed.

A similar point can be made with regards to the domestication of animals. Only a few species were domesticated. The dog began to be used for the defence of villages and herds, as well as hunting. There were also sheep and goats (now present throughout the area and farmed in mixed herds), pigs, cattle and donkeys (used as pack animals). Farming was either sedentary (in the case of cattle and pigs), or transhumant (goats and sheep), both horizontally (with riverside pasturelands in the summer and the nearby plains in winter), and vertically (summer pasturelands in the highlands, and in the valleys during winter). Farmed animals were not just important for meat (mainly pigs, male goats and rams), but also for milk (in the case of cows, sheep and goats), textile fibres and their role as pack animals. This was a clear outcome of the so-called 'secondary products revolution' (A. Sherrat). Alongside farming, those species that had not been domesticated (such as onagers in Upper Mesopotamia, gazelles in Palestine, wild goats on the Zagros), or were a threat to the fields and herds, continued to be hunted. In some areas, river and lake fishing, as well as the collection of shellfish, constituted a further contribution to the provision of food.

Vegetable or animal fibres (linen and wool), which were treated to form threads, led to the development of weaving. This technique is attested through imprints of fabrics on clay or remains of the equipment used (weights used on looms). Therefore, weaving began to fulfil most needs in terms of clothing, largely replacing the use of animal hide. Other secondary production techniques regarded alimentation. The grinding of grains through stone pestles, already used for wild grains, became an essential part of a household's equipment. Pottery became crucial in the cooking and consumption of food and to contain liquids. Small plastered pits still played an important role in the conservation of food (in large jars) over long periods of time. They had to be frequently abandoned or renovated, however, due to their quick decay and infestations.

Stone containers were rare, while wooden or woven containers are badly preserved, but were potentially more widespread (just like woven mats). Stone tools quickly adapted to the production needs of the time. Therefore, the macrolithic tools of the Palaeolithic (percussors, scrapers, and others) and the microlithic tools of the Mesolithic ceased to be used. Tools became more specialised, for instance, in the case of arrowheads for hunting, and burins and bodkins for leatherwork. Similarly, the first types of sickles for the harvesting of cereals, and long blades for butchery and other similar tasks also became a fundamental part of the Neolithic equipment. Unfortunately, wooden tools have not survived, but must have been essential in agricultural activities such as ploughing and sowing.

These processes of production and transformation of resources normally took place in rectangular houses. These houses had wells dug in the ground and plastered pits, hearths, ovens and areas for

milling, weaving and any other activity. The main building material was clay mixed with hay, first stacked in shapeless blocks, then in bricks formed by hand or through moulds. Stones (for the foundations) and wood were used depending on local availability. Regional variations, which will be explored later on, led to the development of different households, centred on a courtyard or spread out in a network of individual units. Thus, settlement plans varied from a largely open layout to a protected terraced plan. The latter form the earliest examples of fortified villages, protected either through fortification walls or a clever layout of buildings, so as to delimitate the edge of the village.

Villages were normally relatively small, an aspect that, combined with the matrimonial strategies of the time, indicates that settlements only had a few large families or even just one. The social structure of these communities was thus characterised by few heads of households (elders), marked gender, age and provenance barriers, but few socio-political differences. Consequently, burials do not display any significant differences in status.

Communities were united and motivated by common religious beliefs, visible from the various cultic artefacts and objects found (Figure 3.4). This religiosity had two main complementary aspects: a funerary aspect, linked, through ancestral cults, to the patriarchal structure of these communities (an aspect that was already visible in the Pre-Pottery Neolithic B); and a fertility aspect (human, animal and agrarian), brought to the fore by the development of food production techniques. These two aspects are closely linked to each

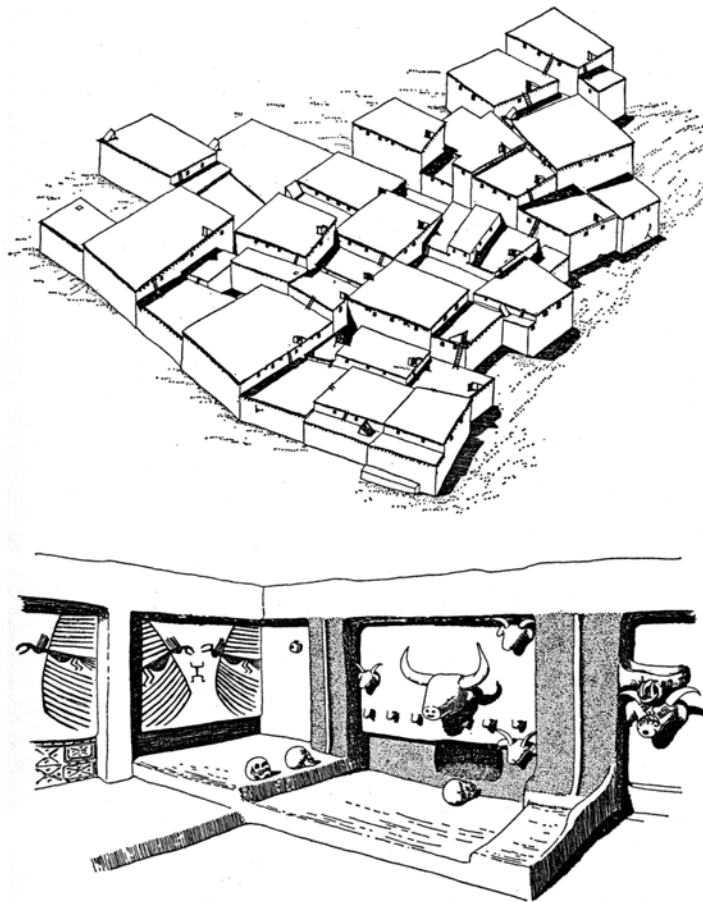


Figure 3.4 Çatal Hüyük. Above: Reconstruction of level VI B, ca. 5900 BC. Below: One of the buildings with cultic decorations.

other, since Neolithic ideology saw a parallelism between the reproduction of animals (based on sexual penetration) and plants (based on the sowing of seeds) and the burying of the dead. The latter was seen as an act somehow similar to the burial and rebirth of seeds. The term 'religiosity' has been preferred to religion here, since its symbolism (largely animal and sexual) and female representations (the Venus figurines) address more natural problems of fertility and mortality, rather than specific divine figures.

The social structure of these communities was therefore based on kinship, with family units (each with its own household), linked to each other through more or less strong ties, acting as an enlarged family. In terms of status, there was little stratification among families, thus constituting a collective community. The same families producing food also pursued secondary activities such as weaving and pottery, without full-time labour specialisation. While there were shared warehouses, certain fundamental expressions of communal life were still lacking, such as temples or other cultic buildings. The earliest communal sanctuaries, though still relatively small compared to the following developments (up until the early stages of urbanisation), only appeared towards the end of this period in Lower Mesopotamia (Eridu).

Regarding the use of the term and concept of 'city' for Neolithic settlements, it is important to point out that this is only an anachronistic attempt at finding the 'earliest city'. Cases such as Jericho, with its walls and tower, or Çatal Hüyük with its 'sanctuaries' have been often misrepresented in this way. Defence systems were certainly the result of a highly coordinated and organised community. However, that is not enough evidence to postulate the existence of a centralised political power, or an indication of typically urban characteristics. Ethnographic studies have demonstrated that egalitarian communities, with few signs of an established social hierarchy, can attain similar results (Figure 3.5).

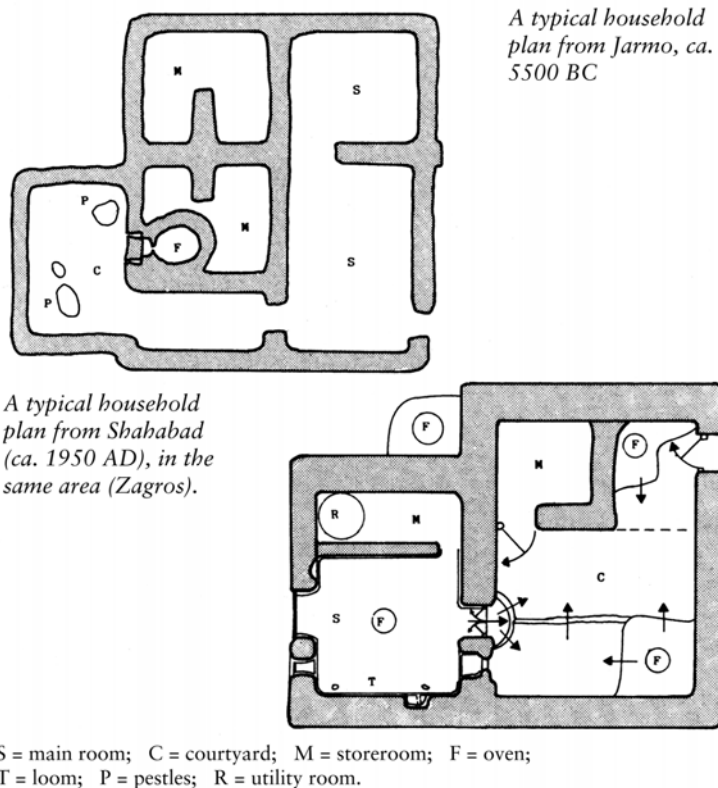


Figure 3.5 A Neolithic household and a comparative ethnographic example.

Regarding the so-called ‘sanctuaries’ of Çatal Hüyük (see the following paragraph), their conspicuous number demonstrates the exact opposite of a specialisation and centralisation of cultic activities. It is certainly not possible to deduce the existence of a (very large!) priestly caste. On the contrary, cultic activities were pursued on a family level, by each family in their own household or in the house of its ‘patriarch’. Thus, these ‘sanctuaries’ are not the result of a centralised or specialised (and hierarchically organised) cultic system. They were the result of a disaggregation of cultic activities, indicating their close connection to the families that performed them.

In terms of territory, another characteristic element is the existence of numerous non-colonised marginal areas used for hunting and gathering activities. Their existence kept each Neolithic village largely isolated. For this reason, the degree of conflict between communities, despite being difficult to trace in terms of evidence, must have been quite low. Moreover, weapons (arrowheads, knives and daggers) were still not specialised enough. Therefore, it remains difficult to establish whether certain weapons were for hunting or for war. The same is true with regards to defence systems, both in terms of the concentration of households and the presence of protective walls. The latter were mainly implemented to guard the community from wild animals, rather than from potential enemy attacks. There were certainly elements of conflict between human groups, but it seems like war was still not essential for modes of production or the interactions among different groups.

Therefore, Neolithic communities were characterised by the limited hierarchy of the socio-economic structure of Neolithic communities, the modest influence of political and cultic leadership, the low density of the population, the availability of resources and the local dimension of production and of family relations. All these aspects pose the problem of whether or not a regional form of aggregation that was above the village level existed. Looking at the material evidence, which is the only well attested type of evidence for this phase, it is quite clear that there were some forms of regional influences. Some features clearly originated from environmental factors and thus have little relevance to the investigation of human interactions on a regional level. Other characteristics, unrelated to the environmental factors, were transmitted both in time (from generation to generation) and space (through imitation, technical and cultural hegemony and so on) from the centres in which these characteristics initially developed.

These aspects are visible from the typological and decorative classification of pottery remains, which allow the individuation of Neolithic cultural units on a regional scale. An even more indicative feature would have been language, which is however unrecorded. It is nonetheless worth deducing that already in this period there were linguistic distributions similar to the ones that would develop later on in the area (except for migrations, subdivisions and syncretisms that took place in the course of time). These cultural elements allow us to locate, at least partially, those ideological boundaries between ‘us’ and ‘them’, which were at the heart of Neolithic social identity: ‘we’ decorate pottery in this way, ‘they’ do it differently; ‘we’ speak the same language, ‘they’ do not (but speak incomprehensible languages).

The correspondence between material, linguistic and ethnic (namely, as the awareness or assumption of a common origin) boundaries varied in time and even in later phases it is still relatively low. Ethnographic examples, however, show that even in less complex environments there can be a close correspondence between culture, language and ethnicity. It is impossible to say whether this was the case for the Neolithic period. Previous historians (or archaeologists) took these correspondences between cultural, linguistic and ethnic boundaries for granted. They therefore believed that communities with the same material culture belonged to the same ethno-linguistic group. Only later on, more critical approaches removed these identifications, thus eliminating the problem.

Admittedly, this radical elimination may have been excessive, but can be explained by the danger of implementing a methodology that equates culture, language and people. In fact, it is not impossible to think that this was a phase of colonisation with signs of a sort of Darwinian selection process between more or less technologically strong groups. The subsequent settlement of groups closer to each other

and the appearance of some elements of unity through language or provenance must have influenced the acceptance or rejection of cultural elements. These aspects certainly formed a certain awareness of a group's identity. Not much else can be inferred and it would be wrong to interpret the material evidence as an indicator of a political system on a regional level. At this stage, communities still acted on a local level.

The economy of these communities was still as local as their political organisation, while cultural as well as environmental features existed on a regional level. However, there were also what could be defined, albeit anachronistically, as commercial interactions. There is no contradiction between the local aspect of production and the existence of long-distance exchange. Basic materials and resources needed for survival were still gathered within a radius of few kilometres from the settlement itself. Moreover, the transport of food and heavy materials over long distances was not yet possible. However, there were precious materials (precious for that period), generally small and light to carry, which were transported over very long distances considering their place of origin.

The extent of the movement of precious materials across the Near East can be studied from non-perishable materials that can be traced back to their place of origin. The typical example of this is obsidian, a volcanic glass whose colour (from black to dark green or brown) and composition varies according to the area it comes from (in the case of the Near East, that would be Anatolia or Armenia). A laboratory analysis can therefore determine the presence of certain elements, which varied from area to area, to establish the origin of a given artefact. This allows us to delineate the network of exchange of obsidian, a highly valued material for the production of blades. Semiprecious stones, seashells and metals also provide valuable information on their place of origin. In any case, these were all materials that were traded in small quantities and mainly used for the construction of decorative objects or tools (semiprecious stone and seashells) of a higher quality (blades were also made of flint, which was readily available throughout the Near East).

Regarding the issue of how exchange took place, it is too simplistic to imply that it was barter. At least two other possibilities can be put forward. First, exchange could have happened from village to village, thus allowing materials to move across the territory. Second, travellers could have brought the materials from their place of origin to the destination site. In this latter case, there could have been two further alternatives. The traveller could have come from the place of origin of the material, or the other way round. The first possibility is a more 'primitive' one, requiring a long time and a high degree of chance. Moreover, this would also mean that materials could not travel very far from the centre. However, the evidence does not support this possibility for two main reasons. First, the rise of competing centres for certain desirable materials (such as obsidian) did not decrease with distance, but shows the existence of privileged routes of exchange. Second, the concentration of these materials did not decrease as the distance from the place of origin increased.

If the available evidence provides a reliable picture of the distribution of materials, it is possible to infer that the second scenario, that of trade with specific villages, is the more likely one. However, on the basis of simple distribution (whose evidence still remains in need of an appropriate methodology for this phase), it remains difficult to decide between the 'export' model (from the places of origin) and the 'import' model (from the destination of the materials). Scholars researching prehistoric trade prefer the idea of a system mainly based on export, due to the semi-manufactured or manufactured condition of the semiprecious stones from Iran. Nevertheless, in the case of trade in historical phases, the import system is well documented. However, this system requires a certain degree of political and economic organisation from the centre pursuing importation, a fact that was closely linked to urbanisation processes.

Therefore, despite its structure as a local network of independent and self-subsistent entities, the Neolithic Near East certainly began to develop an organised regional system. This system featured different complementary areas in terms of resources and potential, characterised by specific cultural traits and with more or less technologically developed and populated environments.

3 Regional variations

In the course of the Neolithic period (Table 3.2), those areas close to the highlands that had initially kick-started the Neolithic Revolution gradually lost their innovating role. Production techniques and domesticated plants and animals were transferred to regions where they were not naturally available. Moreover, interfaces began to be less close to each other and the niches larger. Consequently, the colonisation of plateaus and of the Mesopotamian alluvial plains allowed a wider distribution of cultural traits and knowledge throughout the Near East.

Nonetheless, this large-scale diffusion was not unitary, and cultivated areas remained surrounded by vast portions of forested areas or marshes. Anatolia, for instance, presents a mixed picture. The region had already experienced the innovations developed during the Mesolithic, especially as the main provider of obsidian. However, during the era of incipient food production only the areas south of the Taurus Mountains were at the forefront of this progress. In the following phase, occupation visibly expanded, spreading all the way north of the Taurus. However, the areas in the far north remained wild, largely deserted, and cut off from the wave of innovation taking place in the region. The Neolithic cultures of Anatolia are some of the better attested ones in the Near East, thanks to the large-scale excavations of sites such as Çatal Hüyük, Hacilar, Can Hasan and Mersin. However, the archaeological exploration of these phases throughout the Near East is not systematic enough to allow a complete reconstruction of the Neolithic populations inhabiting the area.

Çatal Hüyük is the most impressive site of this period (600 m long and 350 m wide), with a sequence of fourteen levels from 7300 to 6200 BC. The site was located on the southern edge of the Konya plain. In this position, it benefited from a fertile niche and the interface between the semi-arid plain and the forested mountains. The economy of Çatal Hüyük was based on agriculture and farming. It was also characterised by a better range of resources (wheat instead of spelt, cattle instead of sheep or goats), beautiful stone craftsmanship (predominantly in obsidian), and a large amount of pottery (first polished and light or dark in colour, then red and engobed, but never painted like the pottery from the following period).

The settlement's plan was compact, with houses attached to each other, creating a protective wall to the outside. The lack of streets shows that circulation took place through terraced roofs. The latter provided

Table 3.2 Chronology of the Neolithic period in the Ancient Near East

	Khabur	Jebel Sinjar Assyria	Middle Tigris	Lower Mesopotamia	Khuzistan	Anatolia	Syria
7000							
		Umm Dabaghiya			Muhammad Jaffar	Çatal Hüyük (6300–5500 BC)	Amuq A
6300							
	Early Halaf	Hassuna	Early Samarra (5600–5400 BC)		Susiana A	Hacilar Mersin 24–22	Amuq B
5800			Middle Samarra (5400–5000 BC)				
	Middle Halaf	Late Hassuna Gawta 20	Late Samarra (5400–4800 BC)	Eridu (= Ubaid I) Eridu 19–15	Tepe Sabz	Hacilar Mersin 22–20	Amuq C
5400							
	Late Halaf	Gawra 19–18		Hajji Muhammad (= Ubaid II) Eridu 14–12	Khazineh Susiana B	Can Hasan Mersin 19–17	Amuq D
5000							

the main access to households and were the place where some domestic activities took place. Households had a uniform plan, with beds placed against walls (and under which the dead were buried), hearths, ovens, niches and a ladder to access the building. Despite the fact that houses were all similar to each other, about a third of them indicate the presence of decorations and furniture.

A prominent feature is the bull skull wall decoration, accompanied by symbols of fertility and prosperity and clay female figurines. These buildings were not sanctuaries looked after by priests, but households in which domestic cults were observed. Çatal Hüyük is one of the few sites in the area providing rich evidence on the life of a Neolithic village and clearly displays the symbolic and ritual obsession of its inhabitants. The latter lived in close contact with their dead and with the divine in order to ensure a successful reproductive cycle, considered to be closely linked to the act of sowing and animal penetration.

Other important sites in Anatolia display different features. Hacilar is smaller in size, with a diameter of 100 m, and had a shorter history, made of six levels spanning from 6200 to 5700 BC. Chronologically, Hacilar eventually reached the pace of development of Çatal Hüyük, although the two settlements are very different. Households at Hacilar were grouped units surrounding a courtyard. Circulation through the settlement was on ground level. The domestic equipment was characteristic of the period, but without benches attached to the walls or cultic decorations. It was a poor village with rough stone craftsmanship and painted pottery (red on cream clay). The excavated levels show drastic changes in the settlement: starting from an open village inhabited by many families (Level VI), the village became a settlement inhabited by a single family and surrounded by a rectangular enclosure (Level II), and then a compact set of houses with access from the terrace (Level I).

Level I in Hacilar is contemporary to the site of Can Hasan (5800–5400 BC), characterised by a compact settlement layout with one-room houses. The walls of these houses were internally supported by pillars, reducing the space for domestic activities. Cream-coloured pottery with red decorations continued to be in use here until the appearance of polychrome ware, possibly an influence from further east (Tell Halaf). The site of Mersin provides a different example of a Neolithic settlement. The village had some connections to Upper Mesopotamia (Tell Halaf, then Tell Ubaid) and had a fortress (Level XVI from ca. 5000–4800 BC, with polychrome as well as polished pottery). The latter was actually a juxtaposition of houses to form a barrier to the outside – another example of social organisation, but not necessarily with a political purpose.

Mersin, located in the Cilician plain, had links with the Levant (Syria and Palestine). In the latter area, a number of ceramic cultures developed between 6500 and 5400 BC, but remained quite marginal compared to their Anatolian and Upper Mesopotamian contemporaries. There were three densely populated (or better documented) areas. There was northern Syria, both around the Middle Euphrates and along the coast (Ras Shamra). Syria had links with Anatolia, and its pottery was influenced by the Amuq phases (A, B and C) and, later on, the middle and late Halaf culture, whose final collapse affected the whole area. Then, there were Central Syria (Bequa and Damascus), Lebanon (whose key-site was Byblos) and northern Palestine (most importantly Munhata in the Jordan Valley). The arid areas of southern Palestine (Negev and the Judean Desert) and the Transjordan plateau remained sparsely populated.

Overall, the Syro-Levantine Neolithic ceramic cultures spread from north to south and display a marked revival from the crisis of the seventh millennium BC. However, despite implementing all characteristic techniques of the Neolithic (such as the farming of sheep, which was not a local animal), settlements remained small in size, with archaic features (such as round tents), and relatively poor. This might indicate a difficult situation in the area, which would culminate in another crisis at the end of the sixth millennium BC.

Alongside Pre-Pottery Natufian Palestine, the Zagros foothills (from the eastern side of the Taurus to Khuzistan) were another area formerly at the forefront of the incipient food production phase that experienced a critical period in the ceramic Neolithic phase, though this was manifested in a different way. Palestine, located on the edge of the Fertile Crescent, experienced a crisis caused by resource depletion. On the contrary, the Zagros, surrounded by areas more suitable for agriculture and farming, experienced

a crisis caused by migration. Its inhabitants moved down to the Mesopotamian plains (the semi-arid ones in the north and the wetter ones in the south), where they found a suitable environment for further developments.

Umm Dabaghiyah (6900–6300 BC), located south of Jebel Sinjar, between the Tigris and the nearby steppes, is the earliest Upper Mesopotamian ceramic culture attested. The settlement was made of a few rectangular houses with more than one room and large storehouses made of several square rooms built close to each other. Due to the arid climate, agriculture and farming was not prosperous. This situation made the hunting of wild onagers (constituting 70% of the bone remains found, alongside 20% belonging to gazelles and only 10% belonging to domesticated goats and sheep) the main resource for survival. Pottery is both painted and polished, with incised or applied decorations.

Between 6300 and 5200 BC, three more complex cultures emerged, whose relations were formerly envisioned diachronically, despite their contemporaneity: Halaf in the north, Samarra in the south, and Hassuna between the two. The culture of Hassuna emerged after the one of Umm Dabaghiyah. It was located in the same area, between Jebel Sinjar, the Tigris and the Wadi Tharthar. The main sites of the area were Hassuna itself and Yarim Tepe, close to the Sinjar. Hassuna culture (6300–5800 BC) was contemporary to the first phases of the Samarran and Halaf ones, and was then absorbed by the latter in its middle and late phases. Buildings were of a similar type to the ones found at Umm Dabaghiyah. They were therefore characterised by large rectangular houses and large communal storehouses. The main means for subsistence were non-irrigated cultivations, farming, and hunting. Pottery production was more advanced than in Umm Dabaghiyah, but was not particularly developed, due to the limited range of stone equipment available.

The contemporary Samarran culture is divided into an early phase (6300–6000 BC, attested at Samarra, on the Tigris, and Tell es-Sawwan, located a bit more to the south), a middle one (6000–5600 BC, stretching to the north at Tell Shemshara along the Lower Zab river, to the south-east at Choga Mami on the other side of the Diyala river, and to the west at Baghuz, along the Euphrates), and a late phase (5600–5200 BC, only attested at Choga Mami). Samarran culture was considerably more sophisticated, in terms of settlements (such as the large houses of Tell es-Sawwan and their enclosure walls), pottery, decorated with complex and at times artistic motifs (such as the rotating patterns drawn on the ware, often with naturalistic subjects), and of subsistence methods. In fact, this culture depended less on hunting and more on irrigated agriculture (which is first attested for certain at Choga Mami).

After an early phase (6100–5800 BC) in the heart of the Jezira region, from Arpachiyah (in Assyria) to Sabi Abyad (in the Balikh Valley), Halaf culture spread in Upper Mesopotamia (Figure 3.6). In the Upper and Middle Euphrates region, the Mediterranean coast, and Central Anatolia, Halaf culture also developed into different, yet related, cultures. To the south-east, it co-existed with the late Hassuna settlements (corresponding to the Middle Halaf phase, ca. 5800–5400 BC) and the latter was eventually absorbed into the final phase of Halaf culture (Late Halaf, ca. 5400–5100 BC).

Therefore, the impact of this culture was much more far-reaching than any other culture of the period. It affected the foothills extending from the Euphrates to the Zab and beyond, and had links with the nearby mountainous areas. It is widely believed that Halaf culture owes greatly to those highland groups who descended to the surrounding plains to find vaster spaces for agriculture and farming. However, this descent could have been a seasonal form of transhumance from the mountains to the plains, rather than a fully-fledged migration of people. Halaf culture was mainly sustained through agricultural and farming activities, centred on the cultivation of spelt (without irrigation) and the farming of goats and sheep. This kind of subsistence constituted the final stage of the previous experiments in the area and would remain fundamental to the non-irrigated foothills.

Halaf settlements kept several archaic traits, such as the small circular houses with domed roofs (*tholoi*) preceded by a long rectangular antechamber. In contrast to rectangular buildings, which had already been around for centuries, this kind of architecture certainly indicates a regression in the Neolithic way of using

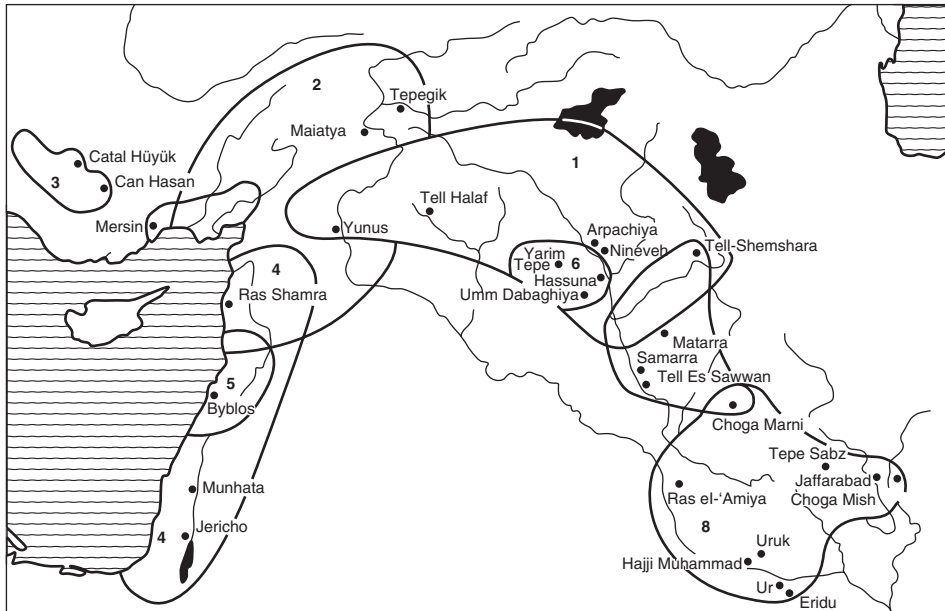


Figure 3.6 The diffusion of ceramic cultures in the Late and Middle Halaf period (ca. 5800–5100 BC): 1: Halaf; 2: Halaf-type; 3: contemporary Anatolian pottery; 4: Amuq D and Palestinian Ceramic Neolithic B; 5: Middle Neolithic of Byblos; 6: Hassuna; 7: Samarra; 8: Hajji Muhammad.

up space. Round buildings prevented the development of building complexes through extensions. Despite this and other archaic features, Halaf culture undoubtedly managed to have a considerable impact on the area, as shown by the diffusion of its characteristic pottery (Figure 3.7). The latter was at the forefront of this kind of production in the Near Eastern Neolithic in terms of workmanship, types, and polychrome decoration.

Lower Mesopotamia was yet another case in terms of ecologic and cultural development. Prior to the centuries-long works of drainage and irrigation, it was largely covered by marshes (Figure 3.8). While in nearby Khuzistan the fully Neolithic cultures of Muhammad Jaffar and Tepe Sabz continued the local sequence (following the culture of Ali Kosh, mentioned above), Eridu culture almost suddenly emerged in the Lower Euphrates area. The quality of its ware, which was of the same quality as the best pottery from Samarra or Halaf, indicates that Eridu must have had a formative stage that remains unknown to us. This is either because it is still buried *in situ*, or because it developed elsewhere (Khuzistan?), and was subsequently brought to Eridu by groups already in possession of core production techniques. The latter, such as irrigated agriculture, are fully Neolithic in character, and were practised alongside fishing, which was prominent due to the settlement's location.

A further development from Eridu culture is that of Hajji Muhammad (near Uruk), which developed in the south (Eridu), reached the area of Kish (Ras el-'Amiya). From there, it spread beyond the Tigris to Choga Marni (where it influenced late Halaf culture) and to the Khuzistan settlements of the Khazineh phase. This area of cultural unity (an area which would later on comprise Sumer, Akkad and Elam) was thriving. It was different from contemporary Halaf culture, mainly because it had to adapt to a different ecosystem. The latter facilitated the irrigated cultivation of grains and cattle farming (which at Ras el-'Amiya constituted 45% of bone remains). This was the initial phase of Ubaid culture, through which Lower Mesopotamia would eventually take the lead in terms of technological and organisational

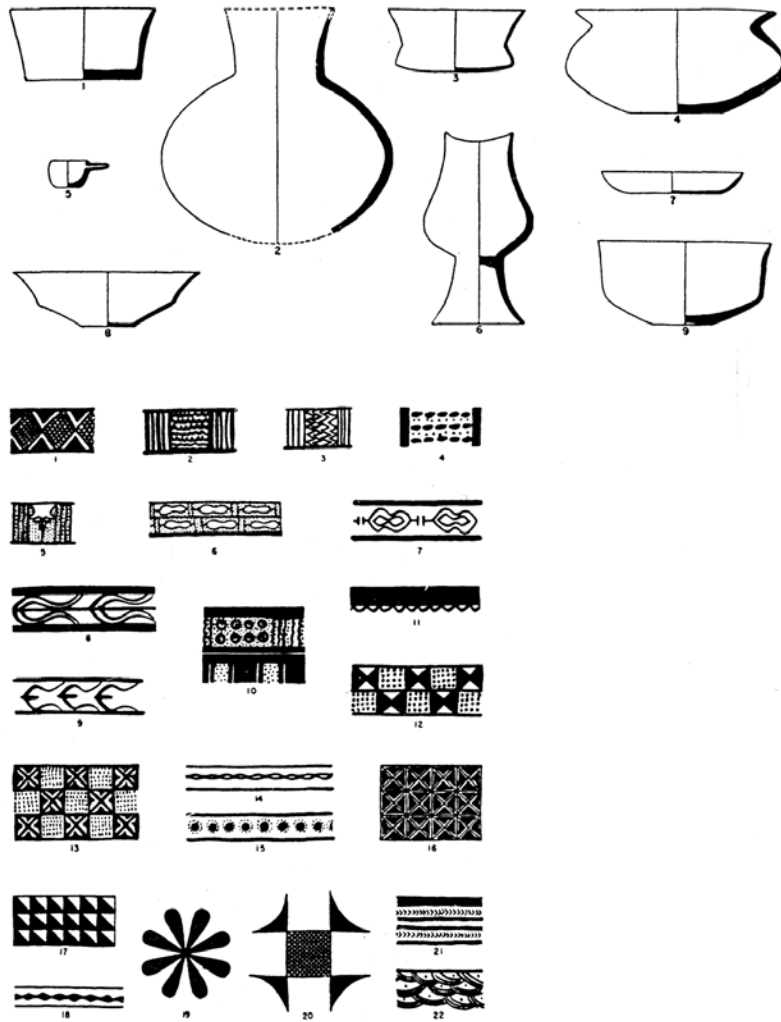


Figure 3.7 Halaf pottery: types and decorative motifs.

development in the Near East. On the contrary, Halaf culture would experience a progressive crisis. In terms of periodisation, the rise of Ubaid culture marks the end of the Neolithic and the beginning of the Chalcolithic period (Table 3.3).

Although the leading cultures of the Neolithic period in the Near East extended from Anatolia to Khuzistan, it is necessary to bear in mind the existence of less rich and advanced cultures on the edge of this area: from the above-mentioned ones in Palestine to the ones in Cyprus (Khirokitia culture, with circular houses and no pottery despite its production economy), in the Zagros (Tepe Giyan and Dalma Tepe), and south of the Caucasus. Through these marginal cultures, located in more difficult areas in terms of agriculture, the Fertile Crescent came into contact with other Neolithic communities outside the geographical limits of this book. Beyond Palestine there were the Egyptian cultures of the Fayyum. Beyond Cyprus and Anatolia there were the cultures of the Aegean and Macedonia. Finally, beyond the Zagros there were the Neolithic cultures of Central Iran (Tepe Siyalk) and Central Asia.



Figure 3.8 The marshes of Lower Mesopotamia, with the typical reed buildings.

Table 3.3 Chronology of the Chalcolithic period in the Ancient Near East

	Mesopotamia		Khuzistan	Syria	Anatolia
	South	North			
4500	Early Ubaid (=Ubaid 3)	Nineveh 3 Gawra 17–14	Susiana C Mehmeh	Amuq D	Mersin 16
4000	Eridu 11–9				
	Late Ubaid (=Ubaid 4)	Nineveh 3 Gawra 13–12	Bayat Susa A	Amuq E	Mersin 15
3500	Eridu 8–6 Uruk 18–15				

4 The first steps towards urbanisation

In Levels 17 to 15 excavated at Eridu (ca. 5800 BC), a number of small buildings have been found. Due to their type and location (underneath later temples of the Ubaid and Uruk phases), these buildings have

been interpreted as the earliest Mesopotamian buildings exclusively dedicated to cultic activities. These small chapels constitute a modest beginning that would eventually lead to a remarkable development. At this stage, however, the dedication of specific spaces to cultic activities is significant, since in other areas such activities were still pursued on a family level (see Çatal Hüyük). This development would become a characteristic feature of the following phase of the Ubaid period, when it grew considerably and reached Upper Mesopotamia, but not the surrounding areas (Figure 3.9).

Ubaid culture lasted a long period of time, from 5100 to 4500 BC in its early phase, and 4500 to 4000 BC in its late phase. Initially, it remained confined to the same area as Eridu and Hajji Muhammad, displaying a marked continuity in terms of settlement and pottery types. This led to the alternative periodisation of the Eridu, Hajji Muhammad, Early Ubaid, and Late Ubaid phases as Ubaid 1, 2, 3, and 4. The main sites of this phase are Eridu itself, Ur, Tell Weyli, and the eponymous site of Tell Ubaid (near Ur) in the far south. Later on, Tell Uqair (near Kutha), Ras el-'Amiya (near Kish), Tell Abada and Tell Madhur (in the

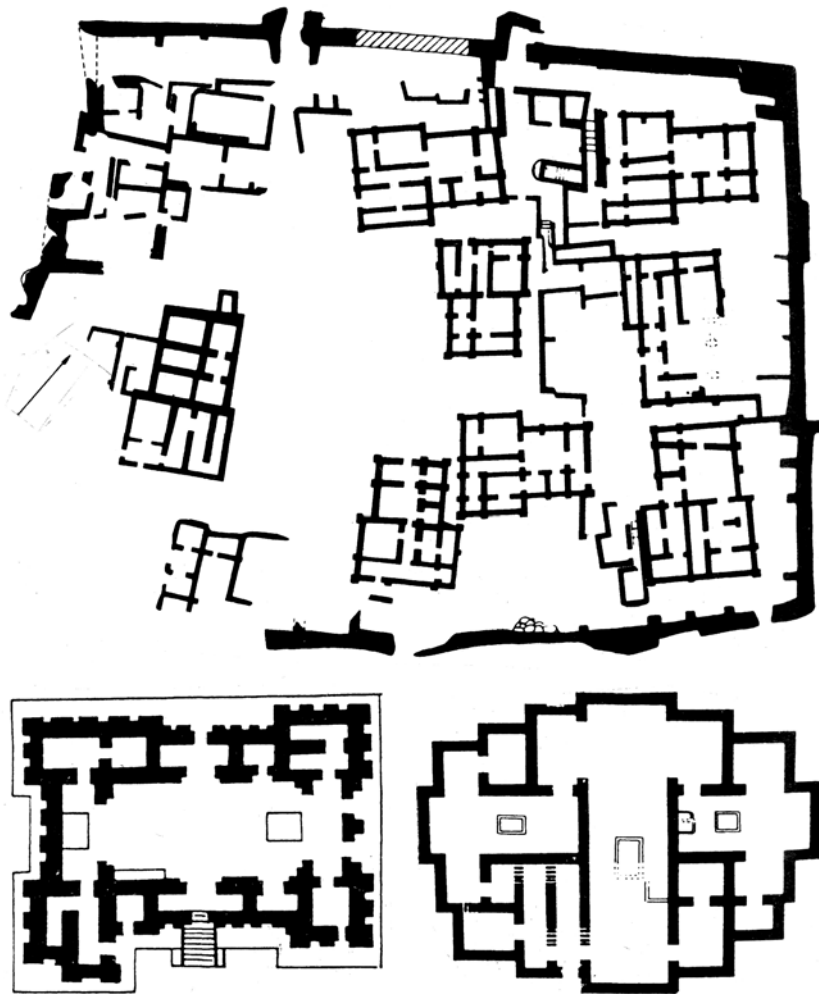


Figure 3.9 Above: The enclosure wall of Tell es-Sawwan, Samarra period. Below, left: Temple 7, Eridu, Late Ubaid period. Below, right: A typical private household plan of the Ubaid period.

Hamrin area) rose to prominence in the north. Pottery finds from field surveys indicate a marked proliferation of settlements. Unfortunately, archaeologists are rarely able to reveal Neolithic levels. This is because more often than not their main purpose is to excavate later historical settlements. To make matters worse, these ancient levels are difficult to find in settlements that did not survive beyond the Neolithic, since they were completely concealed by later alluvial deposits.

The inhabitants of the Mesopotamian lowlands were the first to master, yet still on a local level, the construction of canals for the irrigation of areas which were not arable otherwise, and the drainage of excess water from marshes to drainage basins. As a result, the first fully-fledged agricultural settlements began to appear along irrigation canals. Apart from pottery, the best indicators of agricultural activities found in these centres were clay sickles, more suitable than flint sickles for the harvesting of grain on a larger scale. Alongside agriculture, there was farming (sheep, goats and cattle) and the initial stages of arboriculture (mainly the date palm) and horticulture (onions and various legumes). This development was certainly the result of the increased availability of water. In some centres close to ponds or lagoons (such as in the case of Eridu), fishing also provided a considerable contribution to the diet, and offerings of fish and fishing tools (fish hooks and curved nails to fix fishing nets) were made to the nearby temples.

In certain areas, household architecture remained quite simple, with huts made of twigs and clay. In other areas, it became much more solid and complex (Tell Weyli, Tell Abada and Tell Madhur). At the heart of these more sophisticated settlements there was the temple. As recorded in the archaeological sequences found at Eridu, sanctuaries were reconstructed and expanded after each collapse, and their remains formed a raised platform on which new temples were constructed. Unlike the small chapels of the Eridu phase, the temples of the Ubaid period (Levels 11–8) were larger, with a central room flanked by smaller chambers. In the late Ubaid period (Levels 7–6), temples displayed a tripartite structure (a central hall with two rows of rooms on each side) with buttressed facades (a feature that would become characteristic of Mesopotamian temples for three millennia) and access through a long staircase along the raised platform.

These imposing buildings (20×12 m), which by far superseded anything ever built until then, indicate how the unification of cultic activities outside the household immediately led to a significant change. This change affected both the political and economic organisation of these settlements, and the centralisation of resources and activities (offerings, cults as communal activities, use of workforce for building activities and the possible existence of specialised priests).

There were other clues indicating this tendency towards unification and social stratification. Admittedly, these are not yet fully visible, but are still discernible in the wider context of later developments. One clue is the increased number of precious artefacts, clearly the product of specialised labour both in terms of craftsmanship and procurement of resources, even if not necessarily on a full-time basis. The presence of these artefacts, such as metal objects and semi-precious stones (used for necklaces and stamp seals), potentially indicates the existence of trade and specialised craftsmanship. A second clue is the investment of an increasing amount of resources gathered from household activities for communal and symbolic purposes. This shift indicates a conscious strategy of investment of surplus not towards family consumption, but the development of the community as a whole. As a result of this change, households and burials maintained a visible degree of homogeneity and austerity.

A third clue can be found in the early traces of mass production. On the one hand, this required full-time workers. On the other, it required the existence of some form of political leadership to organise the economic activities of a community, and commission certain products. While the presence of clay sickles does not necessarily imply a certain degree of centralisation, pottery evidence constitutes a better case in point. The ceramic remains of the Ubaid period is hand-made, very refined in terms of technique (from the type of clay to the firing temperature and thinness of the ware) and decoration (which developed from the previous phases, adding new subjects such as animals). By the late Ubaid period, however, pottery became less refined, due to its production in large quantities. This led to the introduction of the potter's wheel, irregular firing,

and less care in the decoration of vases. The process would culminate in the following period (Early Uruk), with a more consistent implementation of the potter's wheel for serial pottery production.

With Ubaid culture, then, it becomes possible to detect the first steps towards the creation of socio-economic and political structures more complex than the ones characterising villages. The starting point of this process has to be the progress in agriculture, which in the Mesopotamian alluvial plain had become possible through extensive irrigation and the introduction of the cattle-drawn plough. These changes led to the beginnings of labour specialisation, the subsequent emergence of agents responsible for the coordination of social organisation and decision-making processes (mainly centred on the leading role of temples), and the progressive social stratification of communities.

From Lower Mesopotamia, Ubaid culture spread to the north, where it took over the now declining Late Halaf culture. The area that is best attested for this phase is the region that would eventually become Assyria. The main sites for this period are Tepe Gawra, in the foothills, and Tell Arpachiyah and Nineveh, on the Tigris. Other centres were located in the area of Nuzi, Shemshara, Jebel Sinjar (Telul el-Thalalat) and Khabur (Tell Brak). Tepe Gawra had a sequence of temples similar to the one found at Eridu, although slightly later in date. The sequence reached its peak in the temple complex of Level 13, characterised by a large courtyard flanked by three sanctuaries and combining southern elements with local ones. The temples of Level 13 feature thin and highly decorated buttressed walls, coloured plaster, a tripartite plan and a lateral entrance. They therefore are equal in quality to the most impressive buildings found at Eridu, showing that in the Ubaid period the two areas were equally advanced both economically and technologically.

However, the two areas were not equal in terms of their landscape and cultural traditions. The buildings of Tepe Gawra continued to be circular in plan from the Late Halaf period (Level 20) to the Early Uruk phase (Level 11). This was possibly due to the settlement's proximity to those mountain settlements where this kind of architecture was characteristic. Moreover, Tepe Gawra reveals an alternation between levels with *tholoi* constructions, and ones with temples in the Lower Mesopotamian style (Figure 3.10). Therefore, in the levels where the former can be found, the latter are absent, and vice versa. This could possibly indicate some sort of competition and incompatibility between the traditions coming from the mountains (continuing the Halaf tradition) and from the southern alluvial plains (with the new Ubaid culture). The settlements of the north relied much more on commercial contacts than on agriculture, which was prosperous, obviating the need to implement irrigation canals. There was an abundance of Afghan lapis lazuli, Iranian carnelian, turquoise, hematite, diorite and Anatolian obsidian and copper.

Just like in the south, socio-political changes followed a similar path in the north. An example of this is the development of the stone industry, with seals decorated with the characteristic geometric designs of the Ubaid culture (in the following period these designs would be substituted by human and animal figures). The developments in the stone industry indicate a type of economic interaction requiring the identification of individuals and a confirmation of their role. However, the discovery of a *tholos* (Level 11) in the middle of a residential area indicates the presence of a leader from one of the mountain communities. His authority was probably the result of military interventions and his control over inter-regional relations.

Although Ubaid culture did not spread beyond the Khabur region, some communities with Ubaid-like pottery have been found outside its boundaries. For instance, there were the communities in northern Syria (Amuq E, Ras Shamra), south-eastern Anatolia (Mersin XV–XII, whose levels with Ubaid-like pottery alternate levels with Central Anatolian type of pottery; Domuztepe), in the Euphrates Valley (Hammam et-Turkman, Kurban Hüyük, Degirmen Tepe) and Iran (Siyalk II–III, with beautiful pottery decorated with animal designs, as well as evidence for wheel-made pottery and copper smelting; and Tepe Hissar I, a commercial centre with links to Turkmenistan). Ubaid-like pottery was also produced in Oman, a promising mining area (mainly for copper).

Despite being at times used for tools and weapons (and not just for small decorative objects) requiring a higher level of technical knowledge, metalworking (smelting of pure copper or arsenical copper) is poorly attested in Ubaid settlements, both in the south and the north. However, this may be due to the continuous

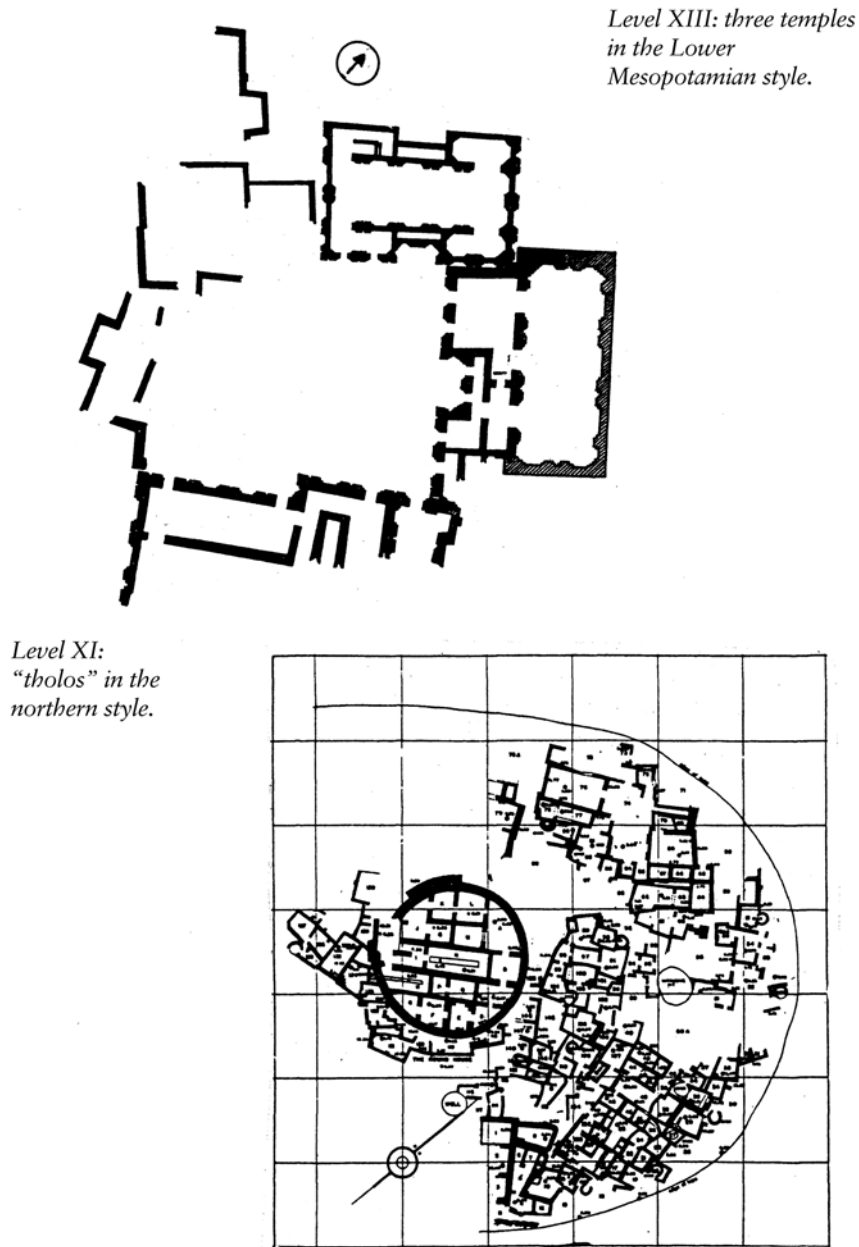


Figure 3.10 Tepe Gawra: interstratification of alternative models of political and social development.

re-use of these metals. The newly developed techniques for copper are far better attested in areas close to metal deposits, such as eastern Anatolia, near the mines at Ergani Maden, and southern Palestine, near the mines at Arabah.

These two areas had different characteristics that deserve to be mentioned. In the case of Late Chalcolithic eastern Anatolia, settlements were predominantly agricultural. However, they were the main providers of copper for the northern section of the Ubaid area. Local metalworking activities thus allowed

the development of a culture displaying the first signs of a transition into a more complex organisational structure and characterised by mass-produced pottery (lower quality bowls with potter's stamps). The most important site of the Anatolian Chalcolithic was Arslantepe, which will be considered later on.

In Palestine, Ghassulian culture (named after the site of Tulaylat al-Ghassul) was predominantly pastoral and generally located in the semi-arid areas surrounding the Sinai, Negev and the Judean Desert. In the summer, however, these communities moved to the rainier areas of the central West Bank and the Jordan Valley. Evidence from burials, caves, and settlements attest to a rich production in arsenical copper weapons (also for ceremonial purposes). This indicates the emergence of leaders whose authority was probably ensured militarily, as well as through their control over herds and copper mines. Therefore, it is possible to see the emergence of an interregional system, which juxtaposes the more densely populated, agriculturally and socially developed Mesopotamian area, with marginal areas responsible for the provision of metal and stone. The latter were strongly influenced by Mesopotamian developments on an organisational level, although power was not yet delegated to a temple, but to the authority of charismatic leaders.

With Late Chalcolithic Anatolia and Ghassulian Palestine (4100–3500 BC) we have reached the end of the Late Ubaid period and the beginning of a phase defined as Early Uruk in the Mesopotamian alluvial plain. There is no clear break between the Ubaid and Uruk period and developments continued in a similar way. However, the different periodisation is needed in view of changes in pottery style. Following the painted ware of the Late Ubaid (Figure 3.11), new polished types appeared, in grey and red, as well as unpolished light coloured pottery, typical of the Uruk phase. Moreover, there are several important indications of progress towards a more centralised economic and political organisation. Unfortunately, we do not possess enough data to determine the pace of development of each settlement, not even on a regional level. It is only possible to establish the various stages of technological development and the degree of growth of temple complexes.

The most important sites for the Early Uruk phase can be found south of Uruk itself (which substitutes Eridu as main site of the period, both archaeologically and historically). In the north, Tepe Gawra remains an important settlement, leading to the definition of the Early Uruk phase in the north as the Gawra phase. At Uruk, the division into stages of development follows the levels of the Eanna, an area that in the Late Uruk phase would become a large temple complex. While Levels 18 to 15 still belong to the Ubaid phase, Levels 14 to 6 are datable to the Early Uruk period. Level 12 indicates the development of a typical kind of ware for this period, defined as the 'bevelled-rim bowl'. This type of bowl was moulded in large quantities and clearly destined for distribution and usage outside the family context, mainly large temple complexes. This aspect will be taken into consideration later on, with the late Uruk phase, when the system reached its zenith.

For now, it is important to note that this type of pottery and its requirement for a certain type of social organisation and production was already in existence around 3800 BC. A large concentration of ovens for ceramic production, as well as the first potter's wheel (which first appeared in the Late Ubaid period), was found at Ur. This evidence indicates the mass production of wares outside the context of households. The use of the potter's wheel spread to all forms of pottery (not just mass-produced types) in Level 8 of the Eanna. With Level 6, at the peak of the Early Uruk phase, there are two architectural innovations: the use of the prismatic *Riemchen* bricks (named by the German excavators at Uruk) instead of the larger and squared bricks used before; and the decoration of temple facades with coloured clay cones.

Levels earlier than Level 4 at the Eanna at Uruk have not yet been investigated in depth, making the understanding of the architectural development of this temple complex difficult to follow in full. However, at Tell Uqair, in Mesopotamia, a temple complex from this period (the so-called 'Painted Temple') has been excavated. The imposing complex was surrounded by an enclosure and placed on a raised platform. This complex gives us an idea of the remarkable growth temple complexes and economic and political structures must have experienced in the second half of the fourth millennium BC. The contemporary temple complex of Eridu presents a similar development. These temples constitute the centre of a unified social organisation that experienced a considerable evolution in this period.

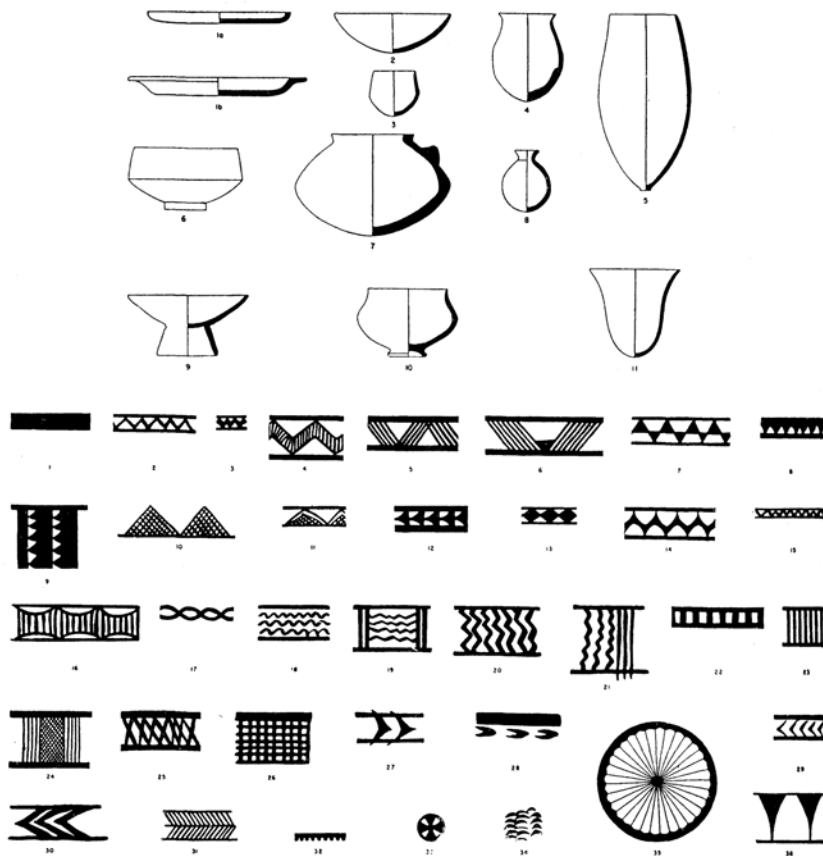


Figure 3.11 Ubaid pottery: types and decorative motifs.

These new settlements began to develop in marked contrast to villages – an opposition that had already begun at this stage, but that will be taken into consideration later on, when it would reach its peak. In the north, a few centres also experienced this development. In particular, Tell Brak and Nineveh seem to have been already on the path to become large cities. However, Tepe Gawra remains our best source for the development of temple areas in this period. The area includes various tripartite sanctuaries. The recession of the main room compared to the side parts of these sanctuaries, and the change of orientation of the entrance (which was from the shorter side), gave them an ‘in antis’ plan, thus distinguishing them from southern temples.

Differences between north and south are not just limited to temple plans. The potential in productivity, and demographic growth of the newly drained and cultivated lands of Lower Mesopotamia, allowed the development of a large environmental niche. In this way, the area managed to become the centre of a remarkable expansion and to dominate the marginal areas. The north, which on a cultural and technological level was not inferior to the south, had however less potential in terms of agricultural and demographic growth. Just like Late Ubaid culture, Early Uruk culture eventually managed to influence more distant regions (such as Upper Mesopotamia and Khuzistan). For now, however, this growth happened locally, within each Late Chalcolithic culture. In fact, a more visible and innovative transmission of typical elements of Uruk culture to the surrounding areas would only take place later on, in the Late Uruk phase.

In eastern Anatolia, north of the Taurus Mountains, where the Euphrates forms vast basins, the Late Chalcolithic culture contemporary to the Early Uruk phase in Mesopotamia can be best explored through

the recent excavations at Arslantepe (near Malatya). Arslantepe is a privileged site, at the centre of a well-watered and protected ecologic niche, close to the forests and pasturelands in the mountains (Figure 3.12). The site already had a long history by the mid-fourth millennium BC, but peaked in the Late Chalcolithic phase. At that time, the site had a temple complex of considerable size and quality, as well as a centre for the production of large quantities of bowls and stamped cretulae (small clay nodules). This development, contemporary to the Early Uruk phase of Lower Mesopotamia, precedes the rise of southern settlements and indicates that some marginal centres had already grown on a local level. This evolution was probably caused by the first commercial interactions with the Early Uruk centres. This was definitely a proto-urban development, but entirely local in this case.

In the mid-fourth millennium BC, certain important political and cultural elements began to appear in the Near East. The Lower Mesopotamian alluvial plain took on a leading role in the technological and organisational development of the area, polarising the surrounding areas. The increasing complexity of interregional relations was mirrored in the increasing complexity of local settlements. Consequently, temple complexes became the socio-economic, political and ideological centres of their communities. The emerging new role of temples has to be linked to the appearance of new forms of religiosity. Offerings, the communal character of cultic buildings, and the presence of more than one temple in a settlement indicate that by this stage there were established divine ‘personalities’ (who would only be named in texts from the following periods) that the community could address for its expectations and fears. Therefore, communities effectively traded earlier generic worldviews about uncontrollable forces guiding nature and fertility, in favour of established divine characters. Already from these early stages, the emerging class of priests and religious officials mediated the interaction between local communities and deities. Therefore, this class took on the privilege and duty of overseeing not only this human-divine intermediation, but also the political and economic decisions of the community.

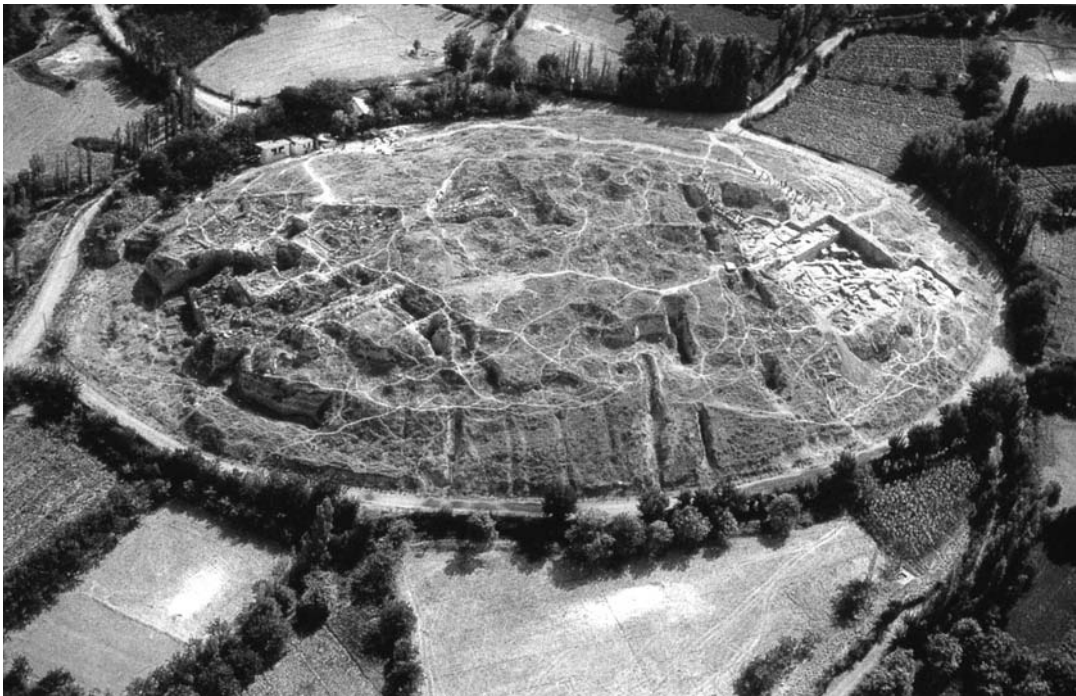


Figure 3.12 Aerial view of Arslantepe, ancient Melid (Courtesy: the Italian Archaeological Mission in Eastern Anatolia).