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## NEOLITHIC SOUTHWEST ASIA

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### ABSTRACT

The Neolithic, traditionally considered the last stage of the Stone Age, refers to a period of time when prehistoric humans shifted from hunting and gathering way of life to one of food production. As humans began to use concentrated tracts of territory for producing food and for grazing the animals, a form of mixed economy evolved meaning that where wheat and barley were grown there also lived sheep, goats, cattle and pigs. However, Neolithic did not arise abruptly and uniformly all over the world. Not all of the cultural elements of Neolithic appeared everywhere in the same order. Neolithic evolution involved a long period of adjustment and the process varied across geographical zones. The archaeological discoveries, for example, give evidence of Neolithic settlements and cultural evolution on the west bank of the Jordan River from around 10,500 B.C. Fully developed Neolithic cultures existed in Mesopotamia and Egypt by about 7000 B.C. Whereas in Europe, Neolithic cultural evolution was not established until about 5000 B.C. It is important to note that when European sites were experiencing Mesolithic transition, Southwest Asia was already experimenting with 'deliberate' growing of crops and domestication of animals. This paper concentrates on the appearance of the Neolithic with its domesticated forms and associated cultural nuances in Southwest Asia and argues that cultural variability was marked within this Neolithic zone, popularly known as the Fertile Crescent. The paper is based on a study of key Neolithic sites in Southwest Asia to understand the underlying complexities of the period.

**KEYWORDS:** Neolithic, Neolithic Revolution, Food Production, Fertile Crescent, Southwest Asia, Domestication, Agriculture, Jericho, Jarmo

When V. Gordon Childe turned to an appreciation of oriental culture and civilization as against the European one, he formulated the concept of "Neolithic Revolution" and uniformly applied it to Southwest Asia (Childe, 1936, 1942 [2016]). Thought to have begun roughly around 12000 years ago with hunter – gatherers living in small nomadic groups transiting to a new phenomenon, the idea of "Neolithic Revolution" was applied to such advancements as the beginning of agriculture, domestication of animals, population growth, permanently settled life, creation of better tools and implements, origin of skilled crafts like pottery, scientific control of fire and the worship of female figurines. It was suggested that humanity changed forever when the shift from hunting – gathering to agriculture took place. While professing his theory V. Gordon Childe argued that Neolithic made humans active partners with nature instead of being parasites on it (Childe, 1942 [2016]).

For a long time, the theory of “Neolithic Revolution” was accepted as the core concept in prehistory but then it began to be modified, and, even altered. Scholars argued that the Neolithic was indeed a momentous development but it has to be understood in its regional context because the change, its extent and expanse was so enormous that the spread may have varied from region to region. Glyn Daniel (1962) and Grahame Clark (1977) questioned the use of the term “revolution” for changes that set in the Neolithic by pointing out that what occurred was more of an “evolution” spread over a long period of time and that there were significant regional variations (Hole, 1984; Rindos, 1987; Watkins, 2010). More scholars demonstrated that the features to understand Neolithic were manifold and that it was a complex phenomenon.

In Southwest Asia, the Neolithic stage of human development is identified through a study of key and prominent sites in the culturally diverse regions of the Levant, particularly southern Levant where Neolithic sites are well represented as compared to sub-desert and dry steppe zones (Wasse, 2000). Sites are also known from a variety of environmental zones from the Northern Levant, the foothills of the Zagros Mountains, the Zagros Uplands and the Taurus/Zagros are where early Neolithic villages are said to have been established in the rolling hill country, the steppe terrain coinciding with open woodland, shrubland and grassland vegetation also with well-watered piedmont zones (Fagan, 2019; Wasse, 2000; Hole, 1984). It is argued that recourse to domestication of plants and animals in Southwest Asia doesn't seem to be a response to deprivation, or even food security, rather it appeared as a more predictable exercise where natural resource of wild grain and wild animals was found in abundance (Rasmussen et al., 2019; Wasse, 2000; Weiss and Zohary, 2011).

The causes for the origins of the Neolithic have been theorised from different perspectives. It is believed that the stimuli that precipitated the introduction of agriculture in Southwest Asia ranged from such propositions as the work of a lone genius who suddenly had the brilliant idea of planting seeds, to the launching and popularisation of the oasis theory based on environmental determinism, or on the human cultural receptiveness to innovation and experimentation, to long-term demographic causative factors disturbing the population to resource balance, or redefining the causes through ‘broad spectrum revolution’, or through concentration on the impact of communication networks of exchange, to a more recent emphasis on causation for Neolithic from an analysis of the principles of human behavioural ecology. Scholars have searched, are still searching, for a set of conditions that may have played a significant role in the emergence of a phenomenon based on the domestication of plants and animals (Childe, 1936, 1942 [2016]; Braidwood, 1960; Fagan, 2019; Hole, 1984).

The early signs of agriculture in Southwest Asia emerged as the last Ice – Age was closing with the ending of the Younger Dryas era, and the beginning of the Holocene epoch about 11,700 years ago. The climate became more favourable with temperatures warming, glaciers melting and sea level rising. Such a reorganisation of the world's eco – system made permanent settlements to come up in favourable ecotones near to lakes, streams and marshes of alluvial soil, enabling the emergence of Neolithic phenomenon (Patowary, 2020; Rasmussen et al., 2019; Asouti and Fuller, 2013; Yerkes, 2012). This marked a new stage in human development making animals and plants integral to the growth of communities in Southwest Asia. It was a phenomenon that focused on harvesting of plants, and, breeding animals by imposing selection with the goal to domesticate them (Zohary, 1996; Wasse, 2000; Zeder, 2011).

Compared to hunter-gatherers of the Paleolithic Age, the territories of the Neolithic farmers were much restricted with fewer people able to till the land, and to rear the animals, in a relatively shorter period of time. Special environment was created by clearing the forests to allow the sunlight to penetrate ground level, which proved useful for edible plants to grow and thrive. This was done by cutting a ring of bark around trees in the forest. The slashing killed the tree and opened the forest for possible sunlight making land available for cultivation (Fagan, 2019). But in the early Neolithic, harvesting of grain was difficult as seeds of grains scattered on the ground when shaken by the wind. But human intervention resulted in the selection of tougher grains with seeds intact, making their harvesting possible in the agricultural season. However, in Southwest Asia domestication of founder crops was a very slow process, even as wild habitats were altered in productive ways, creating profound change in the relationship between the human and the environment (Asouti & Fuller,

2013; Rasmussen et al., 2019; Fagan, 2019). Animals too were domesticated to get continuous supply of food (Wright, 1971; Rasmussen et al., 2019).

As Neolithic evolved in Southwest Asia, new agricultural methods and tool technology developed that made heavier tools like grind stones, mortars and querns important for agricultural activities. Heavy duty ground stone axes were added to the Neolithic tool kit as forests began to be cleared for grazing lands and for fields. This also brought the bifacial lithic tools into prominence (Yerkes, 2012). In the early Neolithic years brittle stone was important to make tools. Arrowhead points and knives designed to cut soft animal tissues could be made from brittle stones, but, the use of brittle stone did not last long (Fagan, 2019). Better tool making techniques evolved to make heavier tools that could withstand the impact against tree trunks, tough stalks, and hard soil. Techniques like grinding and polishing produced smoother cutting edges in tools and we are told that a well-made ground stone axe was made that could last a life time and as an agricultural tool it could be reshaped over and over again (Pittoni & Braidwood et al., 2020; Yerkes, 2012).

But before agriculture could take off in Southwest Asia, another change had to take place, i.e., means for cultivation had to be developed to enhance survival but also for long term propagation (Patowary, 2020). Agricultural methods emerged to clear the land, to prepare the soil, to plant the seeds or perform other tasks to improve and manage agricultural productivity. Apparently, a range of crops so managed were domesticated multiple times (Langue et al., 2014). But once the cleared fields again choked with weeds after a gap of few years, farmers fell the other trees in new areas thus leading to the expansion of agricultural economy in the region, and, of the Neolithic site size as a consequence. A society that acted in this way began to not only produce food but gradually increased its food supply and food output, resulting in continuous supply of food. Clearing forests, tilling the soil and keeping flocks and herds of animals provided Neolithic people with much more dependable food resources, at times yielding them a surplus, a characteristic that differentiates Neolithic food producers in Southwest Asia from their Paleolithic predecessors (Childe, 2016).

Neolithic people in Southwest Asia settled down in their fields, not having to migrate after their food supply, and continued to farm their fields giving rise to complex sedentary settlements. Gradually facilities for storage of grain emerged and these improved as the economy demanded greater specialisation of labour. The need for specialisation not only produced farmers but also carpenters, potters as crafts like pottery was invented in later phases, making the experts divide the Neolithic in Southwest Asia into pre-pottery and pottery levels. Burials existed and there is evidence of ritual worship too as figurines, dubbed as mother goddess, have been excavated at Southwest Asian Neolithic sites. Alongside, findings of amulets, hand axes with perforation in beads strung as necklaces suggest the usage of ornamentation, or even magic (Childe, 2016; Fagan, 2019).

In the Fertile Crescent, domestication of plants and animals was a characteristic of “mixed economy” meaning where wheat and barley were grown, there also lived sheep, goats, cattle and pigs. Recent research shows that both processes were intimately connected and were underway at the same time (Zeder, 2011). To provide fodder for domesticated animals is the linkage between plant and animal domestication. However, it is not easy to understand whether herders in early Neolithic in Southwest Asia were managing plants to harvest or were controlling wild animal’s grazing patterns. In any case, plant and animal communities would have grown once the phenomenon unfolded. Local trajectories were coming into focus as the earliest cultivation of wheat, the einkorn variety, appeared in the Cayonu site from where it spread towards Tell Aswad, Syria central Levant and further south to Jericho, Jordan Valley by 10,200-9550 BC typically located near to springs and lakes. But the assemblage of einkorn wheat appears to be low and less frequent at the Jericho site (Wasse, 2000; Weiss and Zohary, 2011). Emmer wheat turned out to be the principal cereal crop in Southwest Asia as permanent villages spread to other areas of the Fertile Crescent. Its charred grains appeared at Abu Hureyra, northern Levant and contemporary Çatalhöyük, Anatolia. The spread of emmer also covered Ali Kosh, Iran and Jarmo, Iraq between 10,100 to 8700 BC during which time free threshing wheat forms also made their appearance (Weiss and Zohary, 2011).



Another grain crop that survived plant domestication, and proved to be the most important food supplement for domestic animals, was non-brittle barley. Its centre of distribution also lay in the Fertile Crescent being particularly common in the north, east and west of the Syrian desert and the Euphrates Valley besides covering the Jordan Rift Valley slopes and slowly spilling over to drier steppe and semi-desert zones (Weiss and Zohary, 2011). The remains of barley have been recovered along with wheats, and has been treated as a close companion of emmer and einkorn in most Southwest Asia's Neolithic sites (Weiss and Zohary, 2011). Lentils too are said to have been domesticated along with cereals and became part of the cultivation practice between 10,200 and 7750 BC (Zohary and Hopf, 1973). Early sites yielding richest lentil evidence include Tell Aswad, Abu Hureyra, Jericho, Ali Kosh and Cayonu. Among later phases, sites known for lentil domestication include Jarmo (Weiss and Zohary, 2011).

Once domesticated cultivation was soundly established, peas were found to be present in the plant assemblages in Tell Aswad, Cayonu, Jericho and 'Ain Ghazal. Zones with much richer remains of pea carbonised seeds accompanying wheat and barley were also found from later Neolithic sites like Çatalhöyük (Zohary and Hopf, 1973). Like Lentil and peas, chickpeas seem to be closely associated with the start of food production in Southwest Asia but its remains are said to be much rarer in the Neolithic context, confined generally to Cayonu, and Abu Hureyra. The seeds retrieved from these sites are found to have smooth coats of domesticated forms, though found to lie far away from the sites of its wild progenitor (Weiss and Zohary, 2011). Flax was also part of the agricultural system and evidence of its remains come from Cayonu, Tell Aswad, Ali Kosh, Jericho and 'Ain Ghazal though it is stated that the best examples of domesticated flax seed are from drier parts of Southwest Asia (Weiss and Zohary, 2011). The Neolithic people continued to augment cultivated cereals and pulses by a variety of nuts, most commonly pistachio (Wasse, 2000). Subsequently, Neolithic saw intensification and consolidation of plant economies throughout Southwest Asia.

This was effective change, not a sudden occurrence, which became more profound as localised areas turned to domesticate animals, a more complicated affair as it meant making animals shed their wild characteristics. Wild animals were controlled, tamed and reared for food and ensuring availability of dairy products, meat, wool, as well as their usage to carry heavy burden over long distances (Wright, 1971; Rasmussen et al., 2019). By domesticating animals Neolithic people managed their economy without having to constantly wonder in search of food. However, in the beginning of the era about 10,300 BC faunal assemblage dug out from the region of Fertile Crescent has generally produced remains of wild taxa, meaning that hunting still continued and agricultural groups were exploiting wild animals, with the exception of Tell Aswad where claims for early domestication of goat are made in the form of loose herding (Wasse, 2000; Zeder, 2011).

Hunting gazelle was still predominant at Jericho, located in the woodland and moist steppe zones of southern Levant, although between 9,600-8,600 BC a more general shift from hunted gazelle to domesticated goats begins to be documented throughout southern Levant, including Jericho (Wasse, 2000). A similar occupational shift is reflected from northern Levant, Iran and Iraq as some of the earliest examples of sheep and goat domestication emerge from the rolling hill country at Shanidar cave and Zawi Chemi Shanidar sites (Perkins Jr., 1964; Wasse, 2000; Zeder, 2011; Solecki, 1963; Arbuckle, 2018). Similar importance is accorded to Belt caves in Iran, where very primitive herdsman seemed to have wandered with only flocks of goat (McAuley, 2013). Domesticated animals would eventually outnumber gazelle in combination with red deer, wild boar and wild cattle. Researchers also suggest that tentative evidence for pig domestication can be seen during this period (Wasse, 2000; Arbuckle, 2018; Groene et al., 2021).

The trend towards diversified animal domestication continued between 8000 to 7500 BC in the economies of Southwest Asia as cattle domestication was found to have occurred at few sites in the northern and southern Levant, though not at this stage in Iran and Iraq (Wasse, 2000; Zeder, 1999). At Abu Hureyra, proportion of cattle as domesticates is said to have been higher as compared to sheep and goat (Wasse, 2000). Similarly, clearest evidence for domesticated pig was recorded from the Neolithic layers at Jarmo site in Iraq. Here significant size reduction was noted in pig molar remains, an indicator of domestication (Wasse, 2000;

Zeder, 2011; Arbuckle, 2018). By 7000 BC pig bones were recovered from all over Southwest Asia (Groene et al., 2021). By then (7600 BC) mixed herds of domestic goat, sheep, pig, cattle appear to have become significant at Cayonu, Abu Hureyra, Ganj Dareh, Ali Kosh, and Jarmo, indicating the setting in of animal husbandry (Hole et al., 1969; Wasse, 2000; Zeder, 2011). Thus, it would appear that once domestication of animals advanced, the raising of goat and sheep spread rapidly. The process was accompanied by the domestication of pig and cattle in varying proportions, an advantage of diversity, forming the basis of faunal economies in Southwest Asia.

Some of the earliest confirmations of domesticated plants and animals come from the Levantine Neolithic settlement at Jericho, treated as a major breakthrough in archaeology. Scholars believe that Neolithic inhabitants were attracted towards Jericho as it was founded near to a perennial water spring, named Ein-es Sultan, about 9,500-9000 years ago, and they established an 8-10 acres wide settlement, reaching a size of 2.5 hectares as maximum (Kenyon, 1954, 1957; Ramos, 2016; German, 2015; Fagan, 2019). The settlement was surprisingly large and seem to have housed an estimated, at least, two thousand people at a given point in time. Based on this discovery, Jericho has a metaphor attached. It is known as the “oldest town” in antiquity (Childe, 2016; Fagan, 2019; Kenyon, 1954, 1957; Wasse, 2000; Wenke & Olszewski, 2007). Jericho settlers grew emmer variety of wheat, as also barley, and the meat portion of the diet, a source of protein, was being supplemented by raising goat, sheep or by hunted gazelle & wild boar (Brock & Uerpmann, 1974; Wasse, 2000; Zeder, 2011).

A wider pattern of cultural change reflecting on the diversity of human-plant-animal interaction in Southwest Asia is provided by the ‘Ain Ghazal site (9250 BC) located in the Jordanian Highlands. Excavated plant remains reveal reliance on agriculture, with caprine emerging as early domesticates while sheep predominated in the pottery Neolithic stage. Scholars argue that unsuccessful attempts may have been made to domesticate cattle as most cattle remains dug out at the Neolithic site represent wild variety. (Wasse, 2000). Abu Hureyra (9500 BC) In the neighbourhood of Jericho, ‘Ain Ghazal, provides yet another example. The site about 250 metres wide and 500 metres long is considered as the largest known Neolithic site in Syria in its earliest pre-pottery levels (Moore et al., 2000). As a large village of dispersed settled community, Abu Hureyra lay in a well wooded steppe area, where animals and plants were domesticated. The inhabitants were growing a range of cultigens, including two forms of domesticated wheat, einkorn and emmer, and barley, also rye plus legumes (Moore et al., 2000; Hillman et al., 2001). The village people seemed to be agriculturally advanced as they are said to have practised crop rotation at the site, either by design or by accident (Moore et al., 2000; Fagan, 2019; Rasmussen et al., 2019).

As village farming expanded in Southwest Asia settled farming cultures became widespread. Neolithic people at pre-pottery Ganj Dareh (9900 BC) at the foothills of the Zagros Mountains in Iran depict one of the earliest evidences of managed goats and sheep reduced in size, indicating their domestication. Similarly at Ali Kosh (9500 BC) in Iran goat remains, reduced in body size, show clear signs of domestication (Rasmussen et al., 2019). However, in comparison to highland Ganj Dareh, the goats from lowland Ali Kosh were much smaller in size, their remains exhibit progressive changes in shape and horn size because of domestication (Zeder, 1999; Hole et al., 1969; Moore et al., 2000). Managed goats seemed to have been introduced in south-eastern Anatolia (10,500 BC) in the upper reaches of the Euphrates and the Tigris Valleys, slightly earlier than at Ganj Dareh but sheep introduction took place at about the same time as goat was introduced in the highlands (Zeder, 1999; Arbuckle, 2014). As a result, upper eastern parts of the Fertile Crescent are considered a key area for the emergence of farming and herding (Zeder, 1999). It is thus argued that people, increasingly dependent on plant resources, paved the way for herd management (Zeder, 1999).

The pre-pottery stage of the Neolithic, till levels 11, is also represented by the settlement at Jarmo (7500 BC), Khurdistan in northern Iraq. The site is important as it reveals traces of the world’s first “rural” community (Braidwood, 1960; Braidwood & Braidwood, 2015; Childe, 2016). It is stated that less than 20% of Jarmo’s food came from hunting and gathering activities, whereas people primarily subsisted on harvesting grains such as the domesticated versions of both emmer and einkorn wheat as well as barley, in a region

known for the grain's wild grasses. Remains of lentils have also been found suggestive of the knowledge of crop rotation by Jarmo farmers who domesticated ox, sheep, goat, and, also the dog whose remains have been dug out at the site. The later layers of the settlement provide evidence for domesticated pig fossils too (Wasse, 2000; The Editors, Britannica, 2014). By 7500 BC Çatalhöyük, excavated in southern Anatolia, perhaps as the largest uncovered site yet of Neolithic farmers and herders, covering about 28 acres, had an unusual feature. Here agricultural fields were located several kilometres away from its settlement which was densely occupied on marshy land (World's Oldest Town). It is stated that Çatalhöyük inhabitants had gained skills in agriculture, cultivating wheat and barley as also lentils, peas, bitter vetch. They were herding goats and sheep but hunting too continued. The site has yielded remains of wolves, leopards and wild cattle (New World Encyclopedia; Hodder, 2006).

The Neolithic period in Southwest Asia can be illustrated more fully by a study of tools as this sheds light on a larger understanding of human-environmental interaction and the settlement patterns. Neolithic people while cultivating grains were also increasingly exploiting available raw material to make tools and with this, multicausal trajectories came into focus. From 9700 to 8550 BC carpentry bifacial tools were made for the purpose of building permanent houses. However, after 8000 BC as the need for clearing forests for grazing lands, fields, fuel and lumber increased the emphasis was put on making heavier tools such as the polished stone axes though there were variations (Yerkes et al., 2012). As the Neolithic sites expanded, production of flake tools and retouched bifacial knives increased and arrowheads gave way to lighter projectile points. (Yerkes et al., 2012; Wasse, 2000).

For example, excavations at Jericho led to the discovery of lithic assemblages that testify that agriculture was of importance at the site but, curiously experts did not find heavy tools, though remains of post-holes were found in the walls but there were no supportive heavy woodworking tools. At the same time numerous querns, rubbing and grinding stones as well as glossy sickle blades with fine denticulation, are found to be the most common finds along with composite sickles that were set in bone or wooden hafts (Kenyon, 1954, 1957). Similarly, findings indicate that longer sized blades having two serrated edges must have been used as knives. Borers and graters formed the other bulk equipment. Arrowheads too occur but in relatively small numbers. However, the most unique finds have been the pierced stones which experts suggest were actually agricultural tools which when used along with digging sticks prepared the soil for cultivation. (Kenyon, 1954, 1957; Childe, 2016; Ramos, 2016). For their tools, Jericho people mainly used flint (Fagan, 2019; Ramos, 2016; German, 2015).

Chipped stone artifacts were found in abundance in the lithic samples at 'Ain Ghazal as the settlement area expanded. These included blade cores, micro-flakes, flakes, blade, bladelets and flint knappers. Both blades and flakes were found to be evenly distributed at the site but in the later part of the settlement, fine quality flint became rarer while "excellent pink-purple coloured material" was exploited to make tools (Rollefson, 1990). The efficacy of domestication tools is further evaluated from Abu Hureyra where inhabitants tended to manage their environment in a significant degree. Here too, the chipped stone industry was in abundance with sickles, stone axes and along with bone tools. Heavy stone apparatus like the grinding stones were also found since the grain was found to be stone ground. It is stated that the preparation of grain was labour intensive activity. Most stone artifacts were made of flint at Abu Hureyra but a small proportion was made in obsidian. Between the two, the flint artifacts showed some technical advancement. (Rollefson, 1984, 1990; Moore et al., 2000).

The lithic assemblages aligned with the progress of cultivating and domesticating economy at Jarmo where the inhabitants used a variety of chipped stone tools that ranged from very small to large sizes made of flint, and many from obsidian – a volcanic glass. The Jarmo people reaped their grain with flint sickles, prepared the soil for cultivation with perforated weights used with digging sticks found at the site among other tools, including querns and rubbing stones, stone mortars and pestles, stone axes, and abundant bone tools especially awls. The excavated stone palettes from Jarmo depict that its inhabitants were highly skilled in working with stone. (Braidwood, 1960; Braidwood & Braidwood, 2015; Pittoni & Braidwood et al., 2020)



The construction of tools was a major industry in Çatalhöyük also where the focus was on manufacturing obsidian tools as the site was located in the centre of the obsidian resource region in Anatolia. According to scholars the tools made in obsidian such as blades, arrowheads and chisels, besides ground stone axe heads for cutting wood, querns for grinding grain were most desirable. These were made by pecking technique i.e. slowly tapping one rock piece against another rock and removing chips or flakes, and then grinding and sometimes giving them a finish by polishing (New World Encyclopedia; The Project). At Ali Kosh, most of the preferred tools found in the lowest levels of the excavated site were made on bladelets by exploiting local cortical nodules. No obsidian pieces were recovered from the lowermost deposits, although concentrations of chipped flint were found. However, obsidian became introduced at the site through time as stratigraphic excavations at the site which also yielded bullet shaped cores, stone drills, and backed bladelets. (Darabi et al., 2017) From Ganj Dareh comes the knowledge of the use of notched bone scapula and flint blades that functioned to strip off grains (Anderson, 2021; Salvatore, 2021).

Excavations have revealed that building was an important facet of the Neolithic Southwest Asia's lifestyle providing evidence for diversity in terms of layout, size and structural patterns of both domestic and community architecture. The oldest known house structures are from Jericho I where people built round shaped huts from sun dried bricks, which had a design that was flat at the bottom and curving at the higher edge. The bricks were plastered together with mud mortar used as a gluing agent. The houses looked like a cluster of large beehive shaped ovens, and are known as wattle and daub huts i.e. plastered with mud. Some houses were built on stone foundations and measured around 5 metres across. There was though no street planning (Kenyon, 1954, 1957; Childe, 2016; Ramos, 2016; Fagan, 2019; German, 2015). One witnesses a change in cultural tradition with Jericho II where structures seemed to be far advanced. The houses were now rectilinear shaped, made of mud-bricks, with some houses having an elaborate courtyard plan. Floors of the houses were plastered i.e. appeared to have a good finish. Some impressions of reed mats have been preserved. Houses had internal divisions, with storage pits while hearths were located outside and within the houses (Kenyon, 1954, 1957; Ramos, 2016).

As a permanent settlement, Jericho appears to be organised as a community. Its houses were defended by a strong masonry wall, with a round stone tower in the centre, a unique feature of the site having no precedent before or since in the Neolithic period. The wall with a width of 5 feet and height 12 feet was built around a part, or probably whole of the "town", with stacked boulders placed edge to edge and plastered with mud mortar. The wall has a thickness of 6½ feet on the west side where it is still preserved. Just inside the wall, Jericho people built circular shaped stone tower 9 metres in diameter and 8.2 metres high, having steps like a stairway that led to the top of the tower. It is postulated that the wall may have been for defence to keep out animal predators and the tower may have been a flood preventive or the wall may have served as a defence against flood water while the tower may have been used for ceremonial or community purposes. This suggests that some kind of social organisation was happening at Jericho that must have absorbed the inhabitants into a culture (Kenyon, 1954, 1957; Ramos, 2016; Fagan, 2019; Barkai, 2008). Subsequently, Jericho people built a large ditch, 9 metres wide and 3 metres deep, outside the wall. It can be said that labour must have been communally organised to construct these buildings (Kenyon, 1954, 1957; Fagan, 2019).

A localised pre-historic building culture existed at Jarmo with people living permanently in their village, in little more than a cluster of 25 houses built with compact mud bricks/tauf walls having sun dried mud roofs. Found to be rectilinear in shape, the houses were sometimes set on stone foundation with reed floors and formed an irregular huddle separated by small alleyways. The domestic architecture at Jarmo showed a complex division of space as house interiors showed multi-room divisions with ovens and grain pits, having hearths in one corner, chimneys and ovens in another. Excavations revealed that in one particular house there were 7 chambers and 1 large storage area, it may have served as community storage. This shows how commodiously Jarmo houses were furnished (Braidwood, 1960; Braidwood & Braidwood, 2015; Pittoni & Braidwood, 2020; Childe, 2016; Fagan, 2019).

At Abu Hureyra too house structures with several rooms, termed as huts, were built in rectilinear shape from mud bricks, having plastered floors and walls, sometimes showing reed decoration. The houses were built close together joined by courtyards and narrow lanes between them. One excavated building appeared to be complete, had 5 rooms with an entry from a rectangular doorway. The huts also contained underground storage area for grain (Moore et al., 2000; Fagan, 2019; Childe, 2016). Similarly, Ali Kosh has yielded architectural traces of Pisé or mud-brick walls, sometimes with footed floors (Darabi et al., 2019). Another Neolithic community 'Ain Ghazal located in highland Jordan has exposed both single and multiroomed house structures along with a "remarkably" large building which is understood to have played a community role rather than serving as domestic dwelling. Hearths filled with fine grey-white ash have been unearthed. In a few cases doorways seemed to connect rooms. Storage bins too occur at 'Ain Ghazal (Rollefson, 1984, 1990; Banning and Byrd, 1984). Ganj Dareh is also a significant site to study Neolithic sedentary settlement patterns. Through a stratified profile depiction of the site, experts inform that excavations at many levels demonstrate that an early usage of rectangular red bricks construction gave way to the *Chinne* - walled houses comprising quadrangular rooms covered with white plaster and having hearths. Later Neolithic Ganj Dareh became a site of dense agglomeration of dwellings built from sun dried bricks coated with mud plaster, but no stone foundation. Houses had storage structures (Salvatore, 2021).

The large village of Çatalhöyük showed a setting for complexity in its permanent settlement pattern as reflected in the excavated dwellings at the site. Çatalhöyük comprised numerous small rectangular flat roofed houses, built of sun-dried bricks tightly packed together, back-to-back, with their walls serving as the boundary. Excavations showed that there were few or practically no streets. The houses had a peculiar feature i.e. the houses with mud plastered floors had no entrances from the front or from sides. The entrance to the plastered houses was accessed through holes in the roof tops. It is suggested that Çatalhöyük inhabitants used ladders, possibly made of wood, to climb down or up to the roof to enter or exit their houses, possibly arranged for defence purposes and for letting the smoke from hearths escape from the ceiling openings. Hearths, ovens as also raised platforms have been excavated in the house interiors. Also dug out are some side rooms in the houses which are understood, most likely to be storage spaces for grain (New World Encyclopedia; World's Oldest Town; The Project; Fagan, 2019; Childe, 2016).

The Neolithic people in Southwest Asia are found to have buried their dead within the settlements, an indication of developed human sensibilities. The dead were carefully buried immediately below the floor of the houses at Jericho. This appeared to be the normal practice. One can suppose that the Jericho people wished to keep the ancestral spirits with them. However, collective burials in publicly accessible locations are also found in disorderly heaps, showing variance in burial practices. Some skeletons were buried in full length flexed position, some in crouched position and in others the head was displaced and found lying near to the skeleton. In few burial pits detached limbs were also found. Elaborate deposits as grave goods are also excavated at Jericho, such wooden stools, wooden bowls, combs, beads and pins among other items. (Kenyon, 1954, 1957; Childe, 2016; Fagan, 2019) Such distinct burial practices were also found in other sites for example at 'Ain Ghazal skeletons were found deposited with severed heads. However, multiple burials were frequent with pig bones as grave offerings. At Abu Hureyra too headless individual burials are found along with group burials. A number of such graves have been dug out in the houses or even yards with some deformed corpses and others deposited in crouched position. Graves carried goods such as necklaces or show traces of red ochre sprinkled on the skeletons. At Çatalhöyük, the dead were buried inside houses, under the rooms and in a foetal position. Jarmo, Tell Aswad, Ganj Dareh and Ali Kosh too depict burial practices. Among the burials at the Neolithic sites are found remains of younger and older men, women and children – does this mean that they were focal points in ancestral worship or the burials were simple projections to remember the deceased? (Moore et al., 2000; Salvatore, 2021; Darabi et al., 2019; Rollefson, 1984, 1990; Sparks et al., 2020; Kuijt, 2000; German, 2015; The World Encyclopedia; Wasse, 2000; Braidwood, 1960).



Special buildings might have served the ceremonial purpose or could have been places of worship for example the colonnaded building at Jericho, which has been identified as a shrine (Kenyon, 1954, 1957). Similarly buildings with mounted bull's skulls in the walls of their houses and covered with plaster at Çatalhöyük may have been shrines (New World Encyclopedia; Childe, 2016). At Jarmo, a certain rather modest building is termed as shrine (Pittoni & Braidwood, 2020). However, this was not the usual practice in Neolithic Southwest Asia, though religious tendencies have been defined in the form of cults and rituals in the early farming communities.

The most defined cult objects that have survived are of Mother Goddess thought of as a fertility goddess. At one level it is a metaphor for the agricultural cycle and at the other level for human reproduction. Small figurines and statuettes of women have been found made in unbaked mud or in little clay, sometimes shown as seated and sometimes pregnant, said to represent Mother Goddess such as the one found at Çatalhöyük, or clay figurines found at Jarmo (Braidwood, 1960; Pittoni & Braidwood, 2020; Fagan 2019; Childe, 2016; New World Encyclopedia; The Project). Sometimes worship of the male deity, symbolised by the bull, also appeared as documented at Çatalhöyük (New World Encyclopedia; German, 2015; Childe, 2016; Fagan, 2019).

The most remarkable cult objects, however, have been dug out from Jericho in the form of embellished skulls in which flesh parts were reproduced in unbaked clay, most strikingly in the eye sockets. We are told that Jericho people took skilful care in modelling the faces hinting perhaps that some kind of skull cult was part of their lives. At Çatalhöyük too some skulls were painted and plastered and were recreated in human like face. However, skulls were no longer removed from skeletons at 'Ain Ghazal indicating perhaps that the ancestor cult had changed or was abandoned. Other bone or stone models have been found in such settlements as 'Ain Ghazal, Jarmo, Çatalhöyük (Wasse, 2000; New World Encyclopedia; Kenyon, 1954, 1957; Kenyon, Britannica, 2020; Sparks, 2020; German, 2015; Pittoni & Braidwood, 2020; Childe, 2016/ Fagan, 2019).

Pottery was another achievement of Neolithic people in Southwest Asia. The pottery was handmade, it is of simple design and was treated with vegetable solvents. But this characteristic achievement did not appear everywhere in the same order. For example, earliest farming communities like Jericho did not create pottery, its bowls and dishes were made in stone. At Jarmo, there were long periods of Neolithic occupation before pottery came into use and is found in the recent levels of occupancy. The handmade pottery of Jarmo in particular the bowls made from local limestone, has simple designs in the form of impressions. When pottery making reached Jarmo, the craft in other sites had reached beyond the experimental stage, for example at Çatalhöyük pottery is known for fired, unpainted, unglazed and very simple bag-shaped form. It is possible that the pottery was fired in closed kilns. Pottery types consisted of painted and plain at Ali Kosh while at 'Ain Ghazal small quantities of fired sherds gave way to the development of ceramic technology as a local phenomenon. Neolithic Abu Hureyra has yielded pottery sherds in the form of dark burnished ware, the earliest known Syrian pottery (New World Encyclopedia; Wasse, 2000; Fagan, 2019; Darabi et al., 2019; Moore et al., 2000; Braidwood, 1960; Braidwood & Braidwood, 2015; Kenyon, 1954, 1957, 2020; Sparks, 2020).

Yet another thrust of the Neolithic Southwest Asia was rooted in the primitive exchange of goods or trade. According to scholars, the Neolithic villages were generally self – sufficing as each village grew its own food and could make all essential equipment from materials locally available at the sites such as stone, bone, wood, clay. But trade must have evolved when people began to seek resources that did not exist in their immediate areas of settlement. At Jericho, for example where people had not figured out how to make pottery, but for some of their tools they made use of obsidian which was not indigenous to the site. It had to be obtained from far. Jarmo people too obtained obsidian from resource areas located at least 200 miles away. In fact, obsidian trade was carried out in Neolithic sites which were located between Anatolia and Mesopotamia. Turquoise and marine shells were also obtained at Jarmo. Abu Hureyra farmers were using obsidian brought from Anatolia while Çatalhöyük was situated in the heart of obsidian resources. They used flint transported over long distance from Syria. People used obsidian to make sharp edged knife blades, arrowheads etc.

However, obsidian was only one of the materials used as a trading item in the Neolithic Southwest Asia. At Çatalhöyük marine shells were brought in from the Mediterranean. While exotic items such as jade, turquoise too moved from some villages to other villages. These were semi-precious stones used in ornamentation. At Jericho, sea shells obtained from the Mediterranean have been found. Jarmo documents the presence of ornamental shells brought in from the Persian Gulf. Such contacts help spread Neolithic ideas and knowledge (New World Encyclopedia; Wasse, 2000; Fagan, 2019; Darabi et al., 2019; Moore et al., 2000; Braidwood, 1960; Braidwood & Braidwood, 2015; Kenyon, 1954, 1957, 2020; Sparks, 2020).

Neolithic art also existed as artifacts like existence of pottery and mother goddess sculptures made with new sculpting tools validate this fact. Most of the statuettes of this period were themed around female deity, but often animal statues broken into bits have been found scattered in some sites like Jericho. Painting art moved to house walls and added decorative element to human settlements as emphasised by the Çatalhöyük murals on house walls depicting animals, humans, hunting scenes and geometric designs. One of the paintings is themed 'deer hunt' showing animals being pursued by humans organised as a group. Archaeologists have also dug out ornaments, amulets, obsidian mirrors belonging to the period at different sites. Also found are spindle whorls and loom weights made of stones, testifying to the emergence of weaving at sites like Jericho and Çatalhöyük (New World Encyclopedia; Kenyon, 1954, 1957; Rollefson, 1990).

The regional sequence therefore, should be studied in order to understand the significance and changes during the Neolithic rather than looking at the period under an all - encompassing title of 'Neolithic Revolution'. Neolithic in Southwest Asia not only has subsistence economy connotation attached to it but also much larger technological, social and cultural ones that took a long time to flourish as a phenomenon.

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