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## A Localized Approach to the Origins of Pottery in Upper Mesopotamia

Elizabeth Gibbon

Pottery was one of the first synthetic materials created by humans. It is an artificial stone that heavily impacted social, political, economic, and technological innovation since its inception over ten thousand years ago (Rice, “Origins of Pottery” 2). In archaeology, the term pottery is applied to artefacts fabricated through the manipulation of silicate material (typically clay) and then hardened through the application of heat. This process results in the creation of a strong and sturdy construction material that proves to be remarkably durable over time and under a number of environmental conditions (Rice, *Pottery Analysis* 7). In addition to its ready availability, the versatility and physical properties of clay – its malleability when wet and its capacity to harden when dried or heated – made it an attractive resource with many applications (Rice, “Origins of Pottery” 3).

Pottery, as a tool and technology, represents a sophisticated merging of previously separate realms of human knowledge and experience: resources, technological processes, and need. More specifically, this relates to the combination of clay resources and firing technology to meet the human need for the containment of materials through the creation of the pottery vessel (Rice, “Origins of Pottery” 4). Discovery of the chemical changes produced in clay when exposed to fire has been recognized as a significant technological leap in human history. But when and how did such an understanding lead to the production of fired clay containers? Was the intended function of the first pottery container entirely practical, or was its inception tied to a more symbolic or ritualistic purpose? How and why did pottery come to be present in the material assemblages of ancient cultures? The use of clay to make pottery containers does not seem to have originated at any single time or place. Instead, clay pottery appears to have been independently invented in a number of areas across the world, and over a wide frame of time (approximately 8500 to 2500 BCE) (Rice, *Pottery Analysis* 8). In Mesopotamia, archaeologists have documented a continuous record of pottery production stretching almost nine millennia. The issue of when and why Near Eastern communities first adopted ceramic containers, however, remains highly debated (Nieuwenhuyse, Akkermans, and van der Plicht 71).

Approaches to the initial introduction of Mesopotamian pottery tend toward a more functionalist perspective. It is often assumed that Neolithic communities invented pottery primarily for its use in culinary contexts and to store agricultural surplus (Nieuwenhuys, Akkermans, and van der Plicht 71). It has been the prevailing notion that the evolution of pottery tends to move in a linear fashion from coarse and plain to carefully finished and stylistically elaborate. Though this ‘progression’ may be the case when a long-term, supra-regional perspective is considered, it will be demonstrated that the progression from the Pre-Pottery to Early Pottery Neolithic in Upper Mesopotamia is considerably more complex. The site of Tell Sabi Abyad II in Syria provides a stratified sequence of continuous occupation from the Pre-Pottery to Late Neolithic periods (Nieuwenhuys 114). However, the earliest pottery discovered at the site (dated to the seventh millennium BCE) is of higher technological and stylistic quality than its immediate successor. This has led some scholars to suggest that the earliest pottery in Upper Mesopotamia may have been introduced from outside the region (Nieuwenhuys 119). However, through the technological and typological comparison of Pre-Pottery Neolithic ‘software’ technologies and the Early Neolithic pottery assemblages located at Tell Sabi Abyad II, it will be demonstrated that the earliest pottery in Upper Mesopotamia was a local invention that originated from symbolic and ritual practices.

### **I. Theories on the Origins of Pottery**

In the Near East, for several millennia before the production of fired clay containers, clay was used to construct mud-brick architecture and to create stamp seals, spindle whorls, figurines, tokens, beads, and other ornaments. Many of these items were recovered from Pre-Pottery Neolithic contexts and include examples of cups, jugs, and dishes made from untempered and unfired or lightly baked clay (Rice, “Origins of Pottery” 16). Scholars have suggested that these early, unfired clay objects held symbolic significance for their makers and played less of a utilitarian role (Moore 46). This epoch of dried or sun-baked pottery is referred to as the “software horizon” and marks a transitional stage between the use of clay to primarily construct “prestige” items (such as tokens and figurines) to the manipulation of clay and fire to construct “practical” items, namely pottery containers (Hayden, “Evolution of Material Systems” 28). The question still remains as to why humans considered fired ceramic vessels more satisfactory containers than readily available objects exploited in pre-ceramic periods, such as animal skins, gourds, wood, and stone. Scholars have postulated numerous, but not necessarily mutually exclusive or conclusive, theories as to the origins of pottery production. The most comprehensive and salient of these theories are outlined below.

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The ‘architecture hypothesis’ of pottery origins is based on parallels between the construction of buildings and pots. Vandiver proposes this theory on the basis of her analysis of the composition and forming techniques of early vegetal and chaff tempered coarse ware dated to the seventh millennium BCE from sites in Western Asia (29). This fibre-tempered pottery was manufactured by sequential slab construction. Vandiver notes that sequential slab construction is closely related to contemporaneous architectural construction methods, which use mixtures of clay and straw in daub and mud brick. Thus Vandiver argues that pottery technology likely developed out of or alongside Pre-Pottery Neolithic plaster or architectural production. Apart from the similarities in the forming processes of early pottery containers and architecture, there are also technological links between clay and plaster and the use of fire. Others suggest that the firing of clay containers in the Near East may represent a transference of prior pyrotechnical knowledge required for the processing of lime or gypsum to make plaster (Kingery, Vandiver, and Prickett 240). The evidence to support such a hypothesis can be seen in the earliest manufactured containers in the Near East. Referred to as ‘White Ware’, these containers were made out of plaster and often took the form of small bowls or trays and larger storage jars (Nilhamn, Astruc, and Gaulon 66). White Ware forms suggest that an increase in the demand for food processing and storage containers was a possible reason for the adoption of pottery.

The ‘culinary hypothesis’ proposes that the origins of pottery are strictly related to its function as a kitchen-based tool. Proponents of this theory suggest that pottery may have been invented after the discovery that sun-baked clay could be used to create a rigid container amenable for the storage and processing of food items (Rice, “Origins of Pottery” 6). The culinary origin of fired pottery is generally seen by scholars to be interwoven in the processes of food production and sedentarization that accompanied the large-scale lifestyle transformations at the beginning of the Holocene during the “Neolithic transition” (Rice, “Origins of Pottery” 8). Advocates of the culinary hypothesis argue that the creation of pottery represented an improved technology, an adaption or evolution that allowed a new range of foods to be processed and stored in a more efficient manner (Rice, “Origins of Pottery” 6). At present, there is a great deal of scepticism regarding the legitimacy of this theory since it presents an entirely functionalist perspective of pottery origins (Rice, “Origins of Pottery” 10). From this perspective, pottery was developed solely because its advantages were wholly apparent to prehistoric people. However, the apparent advantages of pottery containers may not have been entirely self-evident to early humans and the role of pottery production may not have been as closely entangled with the processes of food production and sedentarization as was previously assumed.

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A third explanation for the origins of pottery is the ‘resource intensification’ model. This theory is based on concepts of intensification observed among hunter-gatherer groups such as resource abundance, distribution, and seasonality. Hayden argues that intensified exploitation of selected, highly productive resources by semi-sedentary groups was accompanied by the emergence of socioeconomic competition on the part of “aggrandizing” individuals with “accumulative personalities” (“Emergence of Food Production” 58). These individuals competed for power, prestige, and wealth by staging competitive feasts featuring rare and highly desirable foods. Further, Hayden claims that container technology would have played an important role as a part of communal display on feasting occasions, primarily as vessels for holding and serving the desired food items (“Emergence of Food Production” 60).

The origin of pottery vessels for use in feasting events was primarily tied to group mobility and interaction. In a population with high mobility, a large number of interactions occur through marriage and exchange with individuals of another group. A population with restricted mobility will have a reduced number of influential individuals capable of controlling intergroup relations; such relations are controlled through marriage alliances and feasting using stored resources (Hayden, “Emergence of Food Production” 58). Thus, in such conditions it would be expected that the use and decoration of pottery would become increasingly significant for asserting social identities and boundaries. Furthermore, instances of increasing complexity and/or seasonal aggregation of hunter-gatherer groups may have been accompanied by exchanges of exotic goods resulting in the emergence of prestige technologies, including specialized pottery production (Rice, “Origins of Pottery” 13).

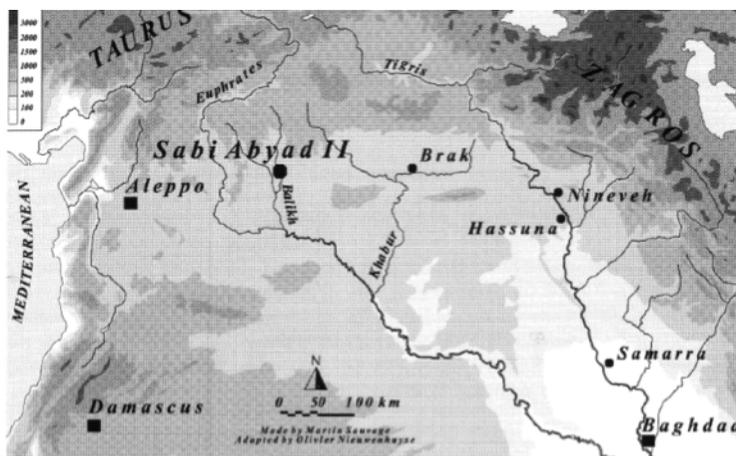


Fig. 1. Location of Tell Sabi Abyad II (van As, Jacobs, and Nieuwenhuysse 98).

## II. Tell Sabi Abyad II: A Short Site History

Tell Sabi Abyad is situated in the plain of the Balikh River, a perennial tributary of the Euphrates, about 30km south of the Syro-Turkish border (see fig. 1). The site is composed of four prehistoric mounds between 1 and 5 ha in size, situated in a roughly linear north-south orientation within close proximity to each other (see fig. 2). They were occupied from the late eighth to early sixth millennium BCE, although not all of the mounds were occupied contemporaneously. Initial habitation of the site originally included all four mounds, but by 6800 BCE occupation had concentrated to the main mound of Tell Sabi Abyad I (Nieuwenhuys, Akkermans, and van der Plicht 75).

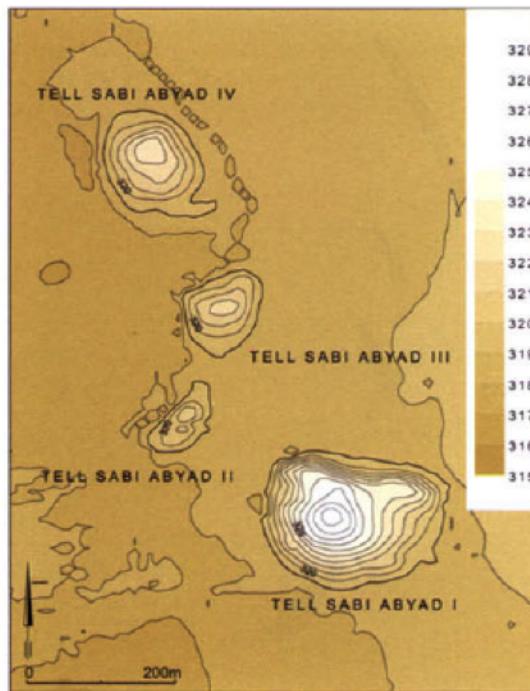


Fig. 2. Topographic plan of the cluster of mounds at Tell Sabi Abyad.  
(Nieuwenhuys, Akkermans, and van der Plicht 76)

Extensive excavations have been carried out on three of the four mounds (Tell Sabi Abyad I, II and III), each of which exposed layers of very early pottery and date to the very beginnings of the seventh millennium BCE (Akkermans et al. 127). All of the excavated mounds are characterized by successive occupation layers of freestanding rectangular buildings consisting of many small rooms surrounded by extensive open courtyards. The architecture is regularly typified by the use of very

large mud slabs for structural purposes, the application of white plaster to the floors and walls, and the construction of extensive mud-brick platforms, which primarily served as foundations (Nieuwenhuyse, Akkermans, and van der Plicht 76). The structures had been frequently rebuilt in the same place and on roughly the same alignment, suggesting a long, continuous occupation of the space over several generations (Nieuwenhuyse, Akkermans, and van der Plicht 76).

According to a series of radiocarbon dates taken from Tell Sabi Abyad II, occupation of the mound occurred between ca. 7550 and 6850 BCE. The bottommost layers of the site have been identified as belonging to the late Pre-Pottery Neolithic B sequence (terminating ca. 7000 BCE) while the topmost layers are part of the early Pottery Neolithic sequence (Verhoeven 179). Stratigraphic profiles of Tell Sabi Abyad II indicate that the mound was continuously inhabited from its initial occupation to its eventual desertion, with no evidence for periods of prolonged abandonment in between occupation layers (Verhoeven 211-12). In addition to the architectural remains described above, a copious amount of material culture was also recovered from each occupation level. The Pre-Pottery Neolithic assemblages were composed of an extensive ground stone industry (including grinding slabs, grinders, a mortar, hammer-stones, celts, and stone vessels), beads and pendants made from stone, anthropomorphic and zoomorphic figurines, clay tokens, White Ware, bone tools, and flint and obsidian industries (Verhoeven 203).

The earliest pottery located at Tell Sabi Abyad II dates to the beginning of the Initial Pottery Neolithic in the seventh millennium BCE. This pottery, referred to as Early Mineral Ware (EMW), was found to occur in extremely low densities and was characterized by clay containing a high concentration (20-25% volume, occasionally reaching 45%) of dark mineral inclusions, which was added as a tempering agent. This pottery is further distinguished by the noticeable care with which the vessels were shaped and finished. In stark contrast to the subsequent coarsely made, plant tempered pottery of the Early Pottery Neolithic, the earliest pottery displays regular wall profiles and rims and an even wall thickness (see fig. 3). Intensive smoothing and burnishing produced a somewhat glossy surface on a number of the EMW sherds which also removed any trace of the primary forming technique; however, hand-made techniques are the most probable (Nieuwenhuyse, Akkermans, and van der Plicht 78). Primary vessel shapes include simple bowls with rounded bottoms and shapes with straight edges. Lug handles are present on a few of the vessels. Surface decoration included the use of red slip and paint (see fig. 4). The slip appears to have been applied with the use of a brush (Nieuwenhuyse, Akkermans, and van der Plicht 80) and the painted design motifs include parallel diagonal lines, diagonal lines in alternating directions, cross-hatching, and diagonal waves. There appears to be an

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uneven discolouration across the surface of a number of the EMW sherds, which indicates that these vessels may have been created through the use of an open-firing technique. In some instances, the darker colour may have been caused by the use of the vessel over a fire (Nieuwenhuys, Akkermans, and van der Plicht 79). In addition to the earliest ceramic assemblage, the Initial Pottery Neolithic occupation layers produced evidence for the continued use of White Ware and stone vessels (albeit in significantly reduced numbers) (Nieuwenhuys 115).



Fig. 3. Early Mineral Ware; earliest pottery from Tell Sabi Abyad; Initial Neolithic; ca. 7th millennium BCE (Nieuwenhuys 117).

Following the culmination of the Initial Pottery Neolithic stage (ca. 6700 BCE), in which carefully-shaped, well-finished, and sometimes decorated ceramic vessels prevailed, pottery production shifted to plain, Coarsely-Made Plant Tempered Ware (CMPT Ware) (Nieuwenhuys 111). CMPT Ware is characterized by its plant tempered and roughly shaped vessels with thick, uneven walls and rims (see fig. 5). Primary vessel shapes include simple bowls with convex sides and large hole-mouth jars. One characteristic shape is a tall pot with vertical walls and a thick, coarse loop handle (see fig. 6). The primary forming techniques included pinching and coiling, after which the vessels were scraped and roughly smoothed (van As, Jacobs, and Nieuwenhuys 104). The excavation of ash filled pits within CMPT Ware occupation layers at Sabi Abyad suggest that this pottery may also have been produced with an open-fire technique (van As, Jacobs, and Nieuwenhuys 105).

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Fig. 4. Early Mineral Ware; earliest pottery from Tell Sabi Abyad; Initial Neolithic; ca. 7th millennium BCE (Nieuwenhuyse, Akkermans, and van der Plicht 81).

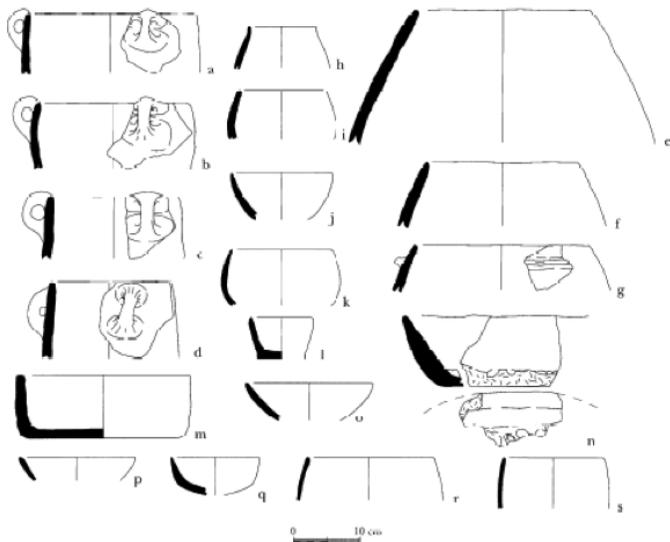


Fig. 5. Coarsely-Made, Plant Tempered Ware; Early Pottery Neolithic; ca. 6700 BCE (Akkermans et al. 139)

Evolutionist models generally chart the long-term development of ceramic production from simple to complex (Nieuwenhuyse 119). However, the ceramic assemblages of Tell Sabi Abyad II distinctly show that the development of a coarse, plain ware was a secondary stage in the evolution of pottery technology in Upper Mesopotamia. It appears that after an initial stage in which carefully shaped, well-finished and sometimes decorated EMW vessels prevailed, pottery production shifted to roughly-made, plain CMPT Ware. The dichotomy between these two ceramic assemblages has led some scholars to speculate that the earliest pottery in Upper Mesopotamia was imported from outside the region, specifically southeastern Turkey where technologically similar pottery was excavated (Nieuwenhuyse 119). However, the material culture produced during the Initial Pottery Neolithic displays a high degree of continuity from its predecessor in the Pre-Pottery Neolithic B (PPNB), which suggests that the earlier, finely-made ware was in fact a local development. The extremely low occurrence of EMW suggests that the initial introduction of pottery at Tell Sabi Abyad II was a small-scale event. Thus the use of EMW would likely have been associated with special occasions or ritual events. These points will be further developed in the following section through typological and technological comparison between PPNB and Initial Pottery Neolithic assemblages.

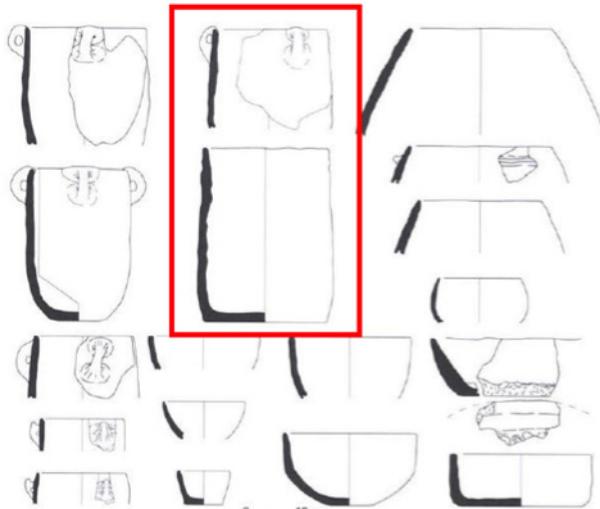


Fig. 6. Coarsely-Made, Plant Tempered Ware; Characteristic tall pot with loop handles; Early Pottery Neolithic; ca. 6700 BC (Nieuwenhuyse, Akkermans, and van der Plicht 75).

### III. The Ceramic *Chaîne Opératoire*: An Analysis

The typological and technological continuity between PPNB material culture and the production of Early Mineral Ware during the Initial Pottery Neolithic (ca. 7000 BCE) will be demonstrated through the analysis of PPNB clay objects, White Ware, and stone vessels. These artefacts of PPNB material culture each represent basic aspects of the ceramic *chaîne opératoire*<sup>1</sup> necessary for the eventual development of fired clay technology. These aspects include: knowledge of the plasticity of clay, knowledge of the effects of pyrotechnology, and knowledge of the advantages and uses of portable containers, specifically in a symbolic or ritualistic capacity. The presence of this material immediately preceding the appearance of EMW suggests that even by the PPNB, early humans had the ability to produce finely shaped and decorated vessels without the need for a prolonged period of ‘trial and error’ through the production of coarsely-made, plain vessels. Furthermore, due to EMW’s low volume of production (Nieuwenhuys 120), any preceding ‘trial and error’ stage may be rendered archaeologically invisible due to low vessel output and the reduced quality of the product, making it extremely vulnerable to taphonomic processes.

Excavation of securely dated PPNB contexts from Tell Sabi Abyad II resulted in the discovery of numerous unbaked clay objects, including anthropomorphic and zoomorphic figurines and tokens (Varhoeven 193-94). The figurine assemblage consists of small representations of bulls, human heads and sitting women, while the token assemblage is characterized by small, geometrically shaped balls of unfired clay (Varhoeven 193-94). These artefacts are clear examples of early clay manipulation by ancient people for the purpose of creating material representations of abstract principles or ideas. The appearance of these objects in a PPNB context suggests that even before the invention of pottery, the people of Tell Sabi Abyad II understood one of the fundamental properties of clay: that it is plastic and thus it can be shaped and retain that shape when dried. The skill of the PPNB craftsman is conveyed through the ability to shape clay into recognizable forms. This suggests that the capacity to craft the finely-shaped EMW of the Initial Pottery Neolithic was within the realm of possibility for the early inhabitants of Tell Sabi Abyad II. Furthermore, it has been proposed that these early clay objects represented “prestige” technologies and their use may have been primarily in ritual contexts, or to convey social identity or group membership during feasting events (Rice, “Origins of Pottery” 38). As previously stated, the creation of EMW during the Initial Pottery Neolithic was a highly skilled operation with limited production. EMW may then represent a continuation from

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1 The *chaîne opératoire* is all of the social and technological aspects involved in the step-by-step production, use, and discard of a material or object.

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the previous PPNB occupation of the use of clay to represent abstract principles such as group identity.

White Ware has been located in both the Pre-Pottery Neolithic and Initial Pottery Neolithic occupational sequences at Tell Sabi Abyad II. White Ware is composed of plaster, a composite of either lime or gypsum tempered with organic or mineral inclusions (Nilhamn, Astruc, and Gaulon 64). Lime plaster is made by heating limestone until it decomposes to calcium carbonate and calcium oxide. This process, which is called 'calcination', requires many days of heating at temperatures between 750° and 900°C and reduces a solid rock of limestone to malleable powder. Before usage, water and organic or mineral temper are added to the powdered blend to increase the strength and plasticity of the product. It is at this stage that objects such as containers can be formed from the plaster matrix before the material hardens through interaction with air (CO<sub>2</sub>) (Kingery, Vandiver, and Prickett 221). The primary forming techniques employed in the processing of White Ware are similar to some of the techniques used in ceramic technology. These include slab construction, coiling, and moulding. In addition, burnishing the surface of "leather hard" White Ware was a common technique used to create a denser, smoother, stronger, and more water-resistant surface (Kingery, Vandiver, and Prickett 222).

At Tell Sabi Abyad II, White Ware is present in both PPNB and Early Pottery Neolithic sequences with no significant change in vessel form. The continuity in vessel form and technology between these two periods also implies cultural continuity. Primary vessel shapes consisted of open and closed bowls and plates with thin, smoothed walls as well as larger storage containers (see fig. 7). Evidence for an extensive White Ware industry in the PPNB sequences at Tell Sabi Abyad II suggests that even before the introduction of EMW, the ancient inhabitants of Upper Mesopotamia were aware of many of the innovative requirements necessary for ceramic production. This included the use of controlled fire to chemically alter the properties of a material, the use of mineral temper to increase the strength of a material, and the use of slips and burnishing to decrease vessel porosity (Kingery, Vandiver, and Prickett 240). The preparation and use of plaster by early humans was a highly skilled, energy and labour intensive activity. The fact that the earliest pottery from Tell Sabi Abyad II incorporates many more aspects of the White Ware *chaîne opératoire* (longer firing times at higher temperatures, the use of mineral tempers, and burnishing) than the later coarse ware suggests that the highly skilled techniques first employed for the fabrication of plaster may have directly influenced the production of an earlier, technologically more advanced ceramic industry before the methods were later adopted and simplified to produce coarser wares.

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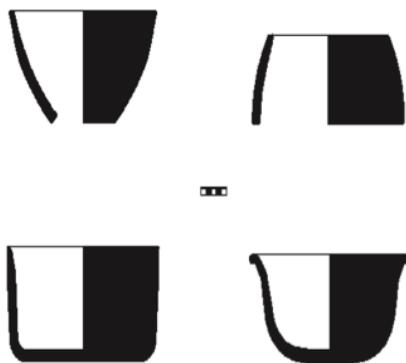


Fig. 7. Common White Ware forms at Tell Sabi Abyad from the Early Neolithic sequence (Nilhamn, Astruc, and Gaulon 66).

Stone vessels represented the most numerous categories of small artefact finds from the PPNB and Early Pottery Neolithic sequences (Verhoeven 192). All vessels were made of limestone, alabaster, or gypsum, varying in colour from white to pink, beige, brown, and grey. In all cases, the exterior of the vessel was smoothed and polished (Verhoeven 192). The main types of stone vessels included open bowls, closed bowls, wide open bowls, and miniature bowls (see fig. 8). Though stone vessels and Early Mineral Ware differ in shape and size, they share the properties of being rare, conspicuous, generally small sized containers that were probably not used for the every-day consumption of food and drink. Both categories of vessel have very even, glossy surfaces (Nieuwenhuys 123). Additionally, the diffuse and often irregular manner in which many of the painted motifs are applied to the ceramics resembles the coloured and banded types of rock used for the production of stone vessels (see fig. 3 and fig. 7). The visually conspicuous nature of the decoration employed for both stone vessels and EMW contributed to the ‘marking’ of each individual container, which allowed for the encoding and transference of social memory. Vessels could potentially be attributed to specific people, groups, or occasions depending on the nature of their decoration. Furthermore, as durable, portable, and relatively lightweight containers, stone vessels and EMW could be transported, exchanged, and displayed with ease. This would have enabled PPNB and Early Neolithic communities to use these vessels as tools to convey social identity and establish networks beyond their local environment (Nieuwenhuys, Akkermans, and van der Plicht 83). Although the specific function of the earliest pottery may have differed from that of stone vessels, they both figured within the sphere of ritual, display, or the consump-

tion of food and drink at special occasions due to their rare and conspicuous nature. The EMW pottery vessel eventually replaced the stone vessel in this capacity at Tell Sabi Abyad II, possibly because it was easier and less time consuming to construct.

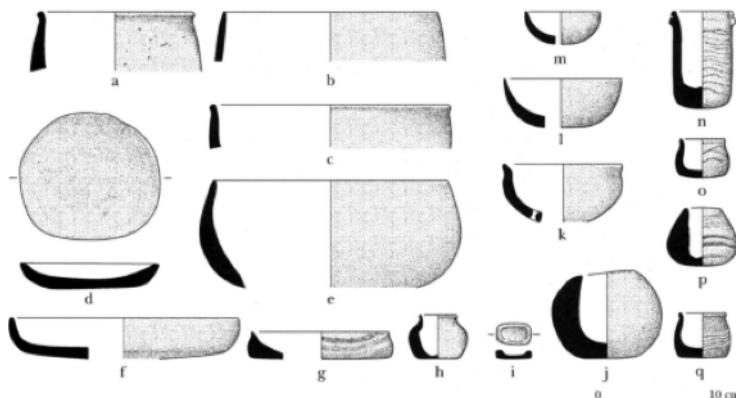


Fig.8. Stone vessels from Tell Sabi Abyad II (Akkermans et al. 141).

It remains to be investigated as to what exactly these Early Mineral Ware vessels were used for in practice. It seems highly unlikely that the earliest pottery was used for long-term storage since the vessels were not of a substantial size or quality amenable to undertake such a task. Cooking may have been among the uses of early mineral-tempered ceramics (Rice, “Origins of Pottery” 27). Traces of soot on some of the EMW sherds (Nieuwenhuysse, Akkermans, and van der Plicht 83) suggest that at least some of the early vessels from Sabi Abyad were used over a fire. The placement of lug handles on some of these vessels certainly would have made this task easier. However, the small numbers of these EMW vessels in daily use at this stage suggest that a large scale ‘culinary revolution’ was not a likely scenario. Instead, this pottery may have been reserved for special occasions, such as feasting events, or for the preparation of rare or seasonally available food items. The transition from decorated, mineral-tempered pottery to plain coarsely-made and plant tempered pottery was likely the result of a number of factors. One of these factors could include a change in religious practice or ideology, though this seems unlikely since there is no associated change in architecture or other material culture between these periods. Alternatively, this shift could be a result of the fact that plant-tempered pottery was easier and faster to manufacture and lighter in weight (Rice, “Origins of Pottery” 27). More expedient manufacture and ease of portability may have been emphasized due to a

widespread shift in culinary practice, which was rapidly turning pottery production into a practical technology. Given these considerations, it is clear that the early inhabitants of Tell Sabi Abyad II had the necessary knowledge, skill, and desire to create technologically advanced pottery forms without an archaeologically visible phase of ‘trial and error’.

#### **IV. Conclusion**

Through the technological and typological comparison of Pre-Pottery Neolithic software technologies and the earliest Neolithic pottery assemblages located at Tell Sabi Abyad II, it is apparent that the earliest pottery in Upper Mesopotamia was a local production originating through significant ties to symbolic and ritual practices. With reference to the theories on pottery origins previously outlined, the origins of the earliest pottery at Tell Sabi Abyad II can be described in terms of a synthesis of these ideas. The reason for the initial production of fired clay containers can be explained using aspects of the resource intensification hypothesis. This theory suggests that the use and decoration of pottery would become increasingly significant for asserting social identities and/or boundaries during communal feasting events. This is witnessed at Tell Sabi Abyad II through the eventual replacement of the stone vessel with EMW (possibly due to increased ease of manufacture), a form that due to its limited production and highly conspicuous decoration undoubtedly was used as a way to convey social identity or memory during the consumption of specialized food or drink. How the initial production of pottery vessels came to manifest itself can be explained using aspects of the architecture hypothesis. This theory suggests that pottery technology developed out of or alongside Pre-Pottery Neolithic plaster or architectural production. Technological links between clay and plaster and the use of fire are readily apparent at Tell Sabi Abyad II since the production of White Ware required advanced pyrotechnical knowledge that was essential for the development of ceramics. Furthermore, the creation of unbaked clay objects preceding the advent of fired clay technology suggests a prior understanding of the fundamental properties of clay that were crucial for the creation of pottery. Explanation for the ultimate abandonment of EMW and the widespread adoption of Coarsely-Made Plant Tempered Ware can be clarified with reference to the culinary hypothesis. Advocates of the culinary hypothesis argue that the creation of pottery represented an improved technology, an adaptation or evolution that allowed a new range of foods to be processed and stored in a more efficient manner. The technological composition of CMPT ware was such that it increased production efficiency and portability, possibly in response to a shift in food processing and storage practices.

The analysis of Pre-Pottery Neolithic material culture, Early Mineral Ware

and Coarsely-Made Plant Tempered Ware at the site of Tell Sabi Abyad II demonstrates that the origins of pottery at any given location is an incredibly complex process that cannot be described within the framework of a single over-arching supra-regional model. A localized approach must be adopted to effectively characterize the particular circumstances that lead to the initial production of pottery at a certain location. It is only through this local perspective that archaeologists will be able to understand the widespread adoption of ceramic technology.

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