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MONOGRAPH IV

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A project to determine the possible bearing of modern ethnographic information on some of the archaeological data was undertaken during the 1970-1971 and 1972-1973 seasons of the excavations at Tell al-Hiba in southern Iraq. Donald P. Hansen, field director of the joint Metropolitan Museum of Art and Institute of Fine Arts of New York University expedition to al-Hiba, initiated the inquiry in the hope that it might cast new light on the archaeological problems encountered at this Sumerian site. The work was supported by the Research Foundation of The City University of New York, the National Endowment of the Humanities, and the Archaeological Research Institute of the School of the Humanities of Brooklyn College.

Tell al-Hiba is surrounded by water, on three sides by marsh and on the fourth by the canal known as Abu Simich, which flows into the marshes near the southeastern corner of the mound. A number of small villages are situated in the general area of the tell. Their people are largely dependent on the produce from plots of irrigated land, small herds of sheep, goats, and water buffalo, and on fish netted or speared in the canals or marshes.

Although the pattern of life in these villages is changing rapidly, certain aspects appear to have remained remarkably constant over the nearly four and a half millennia which separate the Sumerian period from our own time. Archaeological evidence reveals striking parallels in methods of transportation, home building, and the weaving of mats and making of baskets. The economic bases of life in the two periods were also strikingly similar, and there is even some reason to suppose that the general ecology of the area, in ancient times, was not too different from what it is today.

LOCALLY MANUFACTURED POTTERY

The only baked pottery vessel still made in the villages near al-Hiba is the kuz (plural akwaz كوز) used for water or salt. In each village, one or two women make these jars during the summer and sell or trade them to their neighbors. Prices of these vessels vary from 50 to 150 Iraqi fills (13 to 39 cents American) for a small vessel, and from 100 to 300 fills (26 to 78 cents) for a large vessel.

Occasionally a jar is ordered to fit specially under a hib (Pl. 1). The hib is a large terracotta vessel now manufactured only by professional potters in the larger cities,

and used for filtering polluted water. The size of the kuz, in this case, is dependent on the height of the hib stand, and this height is carefully measured by breaking a reed to the appropriate length. Such orders are rare, however, for there are few hibs in these small villages. Except in this particular instance where a fairly accurate height is a necessity, there are only two recognized sizes, large and small. Under these two rubrics, actual size can vary quite considerably. More consistency in size is shown in pots made by a potter in two successive years, least of all in the vessels made by two different potters engaged in this craft. Whether used as a container for filtered water from a hib, unfiltered water collected directly from a nearby canal, or for salt, the kuz is highly valued. If kept in a shady place, a moderate but continuous evaporation from its porous sidewalls keeps the water cool.

Nor does the usefulness of the kuz end when it is broken. From those seen in the village, one can conclude that large chunks broken from the rim do not impede the vessel's function. When broken into pieces, the larger sherds are often used for feeding and watering chickens, cats, and dogs.

The village potters are usually women of middle age who are acknowledged to have special talent in making pottery. The basis of their craft is well known by every man and woman in the village, but these women can do the job a little better. This work offers them a chance to increase the economic resources of their households, and thus adds prestige to their positions inside and outside the family. On the other hand, potting is not allowed to interfere with major household tasks such as planting, harvesting, gathering reeds, making fuel cakes, and the like.

When the potter is ready to begin, she lets the other people in the village know by word of mouth. Orders are sometimes given to her directly. At other times information that a particular family might be interested in a new jar filters back through the good services of a neighbor, and the potter must then follow up this lead. Often this initiates an intense bargaining procedure which may last for several days.

When she has all the orders she can instigate, or as many as she can bake at one firing, the potter starts to work. Special orders are sometimes individually executed, even for a single pot, but such jars are considerably more expensive because of the cost of fuel for firing. According to informants, a woman will occasionally make her own kuz rather than order one from a professional potter, but this is not very economical, and is said to arise from serious quarrels between the woman and the pot-makers in her village. No one ever orders a kuz from a potter outside her village.

MAKING BAKED POTTERY

Collecting the Clay

The clay for baked vessels is collected with extra care. It comes from the canal banks or the edge of the marshes, as does the clay for sun-dried pottery, but the potter is more particular in selecting it. She searches for clay unmixed with debris, often digging beneath the surface to find a quality that satisfies her. She then wraps the clay in damp

cloth and carries it back to her house. It can be used immediately or put aside in a cool place still wrapped in moist rags. As with the clay for sun-dried vessels, there is no intentional curing process.

Adding the Temper

The kind of temper used in all baked pottery is pappus, or those hair-like appendages attached to the seeds of the reed which function in their dispersal when the seed pod opens and ripens. This material is available in quantity for reeds grow prolifically in the marsh area. In addition, some potters also use crushed pottery sherds, cow manure, straw chaff, or crushed reed.

When near maturity, the reed pods are collected from the neighboring marshes and are stored until needed. Water buffalo manure and straw chaff from the threshing floor are available in every village, while dried reed stalks from the nearby marshes are easily crushed to small fragments in the palms of the hands. One woman used crushed potsherds as temper. She collected them from lightly, accidently-baked, abandoned ovens. Since in this area mortars and pestles are made of wood or bitumen-covered, sun-dried mud, she preferred the softer, accidently-baked, local ware which she first broke into fairly small pieces with a stone, and then crushed into smaller fragments in the mortar.

All of the potters interviewed used pappus and four of them used pappus alone. Two potters added crushed reeds or straw chaff interchangeably, one added crushed reeds, one added cow manure and chaff or crushed reed, and, as noted, one added ground pottery sherds. Claims for the sturdiness and durability of the finished product are often made on the basis of the temper used by each potter. Examination of individual pots and potsherds, however, would seem to indicate that these claims have little basis in reality. The temper is carefully worked into the clay by kneading and thumping. When sufficient clay is prepared in this fashion, it is put in a handy container, a pail or pan, and a broken reed pot is placed on top of it for easy access. As each handful of clay is selected, a little extra pappus is taken with it, and worked into the clay at the last minute.

Construction of the Vessel

The base section, a very thick circular disk of clay, is carefully molded to shape and size on an old potsherd, a piece of flat metal, a section of reed mat, or anything which can be easily turned on the ground. The potter then pushes downward with the back of her left hand or clenched fist in the center of the disk, using the fingers of her right hand to pull up and form the first level of the sidewalls, usually about ten cm high. When this base section is roughly fashioned, she uses both hands and fingers to equalize the thickness and improve the angle of the sidewall, to improve the symmetry of the interior opening, and to smooth and finish the entire section. The base section is usually very thick and solid, and when completed, is put in the shade and allowed to dry for one or two hours (Pl. 2).

When the base section has dried slightly, the potter adds the next stage. A handful of clay with additional pappus, carefully kneaded and then rolled in the palms of the hands,

is then worked into a short, flat strip of appropriate thickness with the fingers, and applied to the sidewalls of the base section. It is joined firmly with the downward pressure of the fingers, inside and out, while the pot is turned on its mat or sherd to afford easy access to the potter. Usually two or three short, flattened strips of clay four to six cm in height are used for the first course. Later courses require a greater number of clay strips as the belly of the jar curves outward. Pappus from the reed pods tends to collect in little balls, even when the clay is well-kneaded, and these must be pulled out as the potter works. The clay is either smoothed downward from above to cover the subtraction, or a new bit of clay is taken from the pail to make the necessary repair. The partial pot is allowed to sit for another hour or two, while the first course of clay dries, and then an additional course is added. Each course of clay is approximately five to six cm high. After the second course, the pot is carefully smoothed with wet fingers or with a ball of muddy pappus, and sometimes with a reed stick, to obliterate signs of juncture inside and out. At this point, the pot is usually put away to dry overnight. An attempt to continue to build up the vessel on a wet base would result in its collapse.

The next day the construction of the pot continues, one level at a time. During the joining of each course to its predecessor, the hands are used alternately as anvils and forming agents, inside and out.

Many water jugs do not have handles, but smaller ones of portable size sometimes do. To make a handle, clay is rolled between the palms to form a thick, rope-shaped piece, one end of which is flattened into a short strip of the same kind used in building the sidewall. This becomes a part of the sidewall at the beginning of the construction of the third from last course (Pl. 3). This strip is firmly held in place by additional wedges adjoining it, to which it is carefully attached and smoothed. The rolled extension is then formed to the appropriate angle, and the vessel is allowed to dry. Two or three hours later, when the next to last stage is being applied, another roll for the handle is prepared. It is somewhat thicker than the first, and is not flattened at either end. A hole is bored in one end with the second finger of the right hand so that it will slip over the semi-dried roll already in place. The new roll is then put over the old and firmly anchored to it with a downward pulling motion of the hand. A thick coating of clay is applied around the juncture point and carefully smoothed upward and downward to make certain the joint is a good one, and to encourage the new part of the handle to stay in its proper position during the next drying period. Another roll with flattened end is applied at the beginning of the final course. This is thicker than the previous ones, is bored with the finger, is slipped over the handle section already in place, and is fastened to it as the second roll was fastened to the first. After the last course of the sidewall is finished, bands of clay are applied inside and outside of the flattened handle strip and are carefully smoothed into the adjoining sections of the sidewall to make certain the top of the handle is firmly anchored. When the last course is completed, the vessel is carefully smoothed inside and out. No special attention is given to the lip and rim during this process, and as a result, variations in these features are created on the same pot which would seem strikingly different if they were observed from broken sherds.

Whether the potter makes only one pot at a time or makes several at the same time, doing one stage on each in order, seems to be largely a matter of individual preference. There is a tendency to dismiss a rival potter by saying that she is only capable of making one pot at a time, or that conversely, she makes many pots at the same time and cannot give each her individual attention.

Decoration

The kuz can be decorated in a variety of ways. Broken bits of china, glass and the like may be inserted in a pattern. Bands of clay may be applied and impressed with the fingers or incised with a sharp reed stick. Barbotine decoration may be applied, and the vessel may be incised directly on its shoulder or belly. Decoration and the choice of temper used seem to be the two areas where the potter expresses her own individuality, and in the former at least, her originality as well. A potter, according to informants, seldom decorates two pots in identical fashion. On the other hand, they claim that there is sufficient similarity (stylistic scheme) which allows any villager to identify the particular maker of the kuz at a glance.

Firing

After the pot or pots have thoroughly dried (from two to four days in the summer), a trench of appropriate size is dug well away from the village houses. The bottom is lined with two layers of dung patties (each patty ca. 20 cm in diameter) laid flat. The jars are placed on their sides on top of these and the whole of the trench is then carefully filled with dung patties laid on their edges and leaning at an angle against the vessels to be fired (Pl. 4). When the pit is completely filled, there will be two layers of dung over the vessels' tops. An abundance of verde or small dried reeds is laid around the patties and the fire is then ignited. The reeds burn with a hot, intense flame, igniting the dung patties. In about ten minutes, the patties are burning brightly and in about 15 minutes, the whole becomes a mass of red hot coals. At this point, more dung cakes are added, and this continues at intervals of about 10 to 15 minutes for a period of one to two hours. A normal firing of five pots requires from 350 to 450 dung patties which cost about 350 to 450 Iraqi fills (40 to 59 cents American) if purchased on the open market. When the hand feeding is completed, the fire is allowed to burn itself out and left overnight to cool slowly. The baked pottery is removed the next morning, often with two sticks as the terracotta is still too hot to be touched comfortably. It is most important that the vessels be absolutely dry before firing in this manner, for any moisture in the clay would cause the vessels to crack under the quick and intense heat of the firing process.

Considerable difference was noticeable in the color of the kuz depending on the length of time that the fire was actually fed. When the fire was fed for an hour only, the pottery emerged colored 5YR 6/4 light reddish brown, but when fed for two hours, the color was 5Y 7/2 light grey. In the case of the reddish brown pottery, those parts of it facing away from the center of the trench often showed a whitish surface describable as 10YR 8/3 or 7/3 very pale brown. Although one might expect that an individual potter would be consistent in the length of time that she hand feeds her fires, this is apparently not the case. Informants state that potters gauge the number of dung patties needed for the firing and fill the trench with as many of these as possible. Only those left over from the original estimate were hand fed. Therefore, if the trench is a little larger at one firing, the hand feeding process is shorter, but if the trench is a little smaller, the fire is fed for a longer period.

Curing

When the pottery emerges from the kiln it is not yet ready for use. It is first thoroughly moistened with water, usually on the canal bank, and then good, clean clay is rubbed liberally all over its inside surface with sufficient pressure to force it into any cracks or imperfections in the vessel. The excess clay is then scraped out with the fingers and the jar is filled with water and allowed to sit for one or two days. At the end of this period, the vessel is rinsed several times with fresh water and is finally ready for service.

SOME REFLECTIONS ON THE EARLY DYNASTIC POTTERY EXCAVATED AT AL-HIBA AS A RESULT OF THE MODERN STUDY

Evidence from the excavations at al-Hiba indicates the possibility of a home pottery industry in Early Dynastic times. A small quantity of handmade pottery sherds has been found in Early Dynastic levels, and it seems curious that professional potters would throw most of their vessels on pottery wheels while making a few similar shapes by hand. The firing of these sherds is markedly different from the accidentally fired, sun-dried mud containers and shows far greater variety than do those sherds from wheel-made pots. This same marked difference is characteristic of modern trench firings where the length of firing is often accidental. Although this evidence is not conclusive, it seems possible, given the ubiquitous nature of the necessary raw materials, that a modest home pottery industry flourished in the Early Dynastic period.

The modern evidence collected also raises some question about technological change as a device to generate sales in antiquity. Changes in pottery decoration have always been one of our most sensitive indicators as they usually occur rather rapidly and often reflect the manufacturer's urge to innovate a more saleable product as well as the taste of the community. We may never know for certain if such things as modern claims for the beneficial effects of a certain temper or the varied methods employed in building a series of pots played a role in the pottery production of Early Dynastic times. We can conjecture, however, that something of the sort existed when we discover technological innovations unaccompanied by improvement in results or ease of manufacture.

Most pottery classifications are based on differences in shape, fabric, technology, and decoration. While these factors do indeed reflect certain cultural aspects of a community and are excellent chronological indicators, they need not be directly related to the vessel's function. Since the pot was made and purchased for a particular purpose, an important aspect of its cultural significance, and thus the proper interpretation of the archaeological context from which it came, is often missing. The difficulty of assigning function to a given pot in a particular context is borne out by the modern use of the kuz. Although a reasonably intact example (pieces broken from rims are not considered to interfere with the primary function) is used for water or salt, we found several of these jars, badly cracked, used for grain. When broken, large sherds from such a vessel are used for feeding and watering chickens and turkeys in the courtyard or for storing or organizing small quantities of a wide variety of things inside the house. In this case, the function of the pot is in part determined by its physical condition and points to the archaeological need of collecting and classifying each sherd in an archaeological unit.

One finds a surprising range of variation among these jars manufactured by modern villagers. The necks can be nearly the same diameter as the vessel body, or considerably smaller. Rims can be straight, curve outward, curve gently inward, and are occasionally interrupted by a loosely-defined pouring mouth. Lips can be rounded or flattened, and are sometimes rounded in one part and flattened in another on the same jar. Some have handles, and others do not. The decoration varies widely in comparisons between the products of different potters. Although one village potter's work shows more consistency than this general picture, the range of variation is still very wide. It is not unusual for one side of a single vessel to show a different profile and/or lip treatment from the other side.

One might reject the evidence of the homemade pottery, for it is clearly subject to the expression of more individuality than the products of large workshops, where pottery is turned out in great quantities. On the other hand, the case for a considerable amount of variation in Early Dynastic times is borne out by the pottery finds from al-Hiba. The largest number of profiles or whole vessels recovered from the excavations were from conical bowls and goblets. Although we cannot yet determine regular variations from a standard norm, we can note the variation exhibited in the structure of individual examples. If the diameter of the base or rim of a single specimen is taken from two separate starting points, the results are seldom the same. In addition, the height, lip treatment, surface color, and even the entire profile of the pot can be very dissimilar if taken at different points. The range of variation in a single ancient pot can be as great as five cm in rim diameter, three cm in base diameter and four cm in height. If these pots were found in non-joining sherds, the measurable variation would be even greater, and unless one had seen and examined whole pots of this type, he would never believe that they belonged to the same vessel. These bowls and the so-called "goblets" are obviously very carelessly thrown. Other forms are sometimes more carefully made, but regular variations of slightly less magnitude occur in medium-size vessels and much greater variations occur in coarse ware vats. It would seem, therefore, that a proliferation of types made on the basis of minor differences in shape and size of rims and bases reflects little in terms of function but the accuracy of one's measuring tools.

Plate 1.

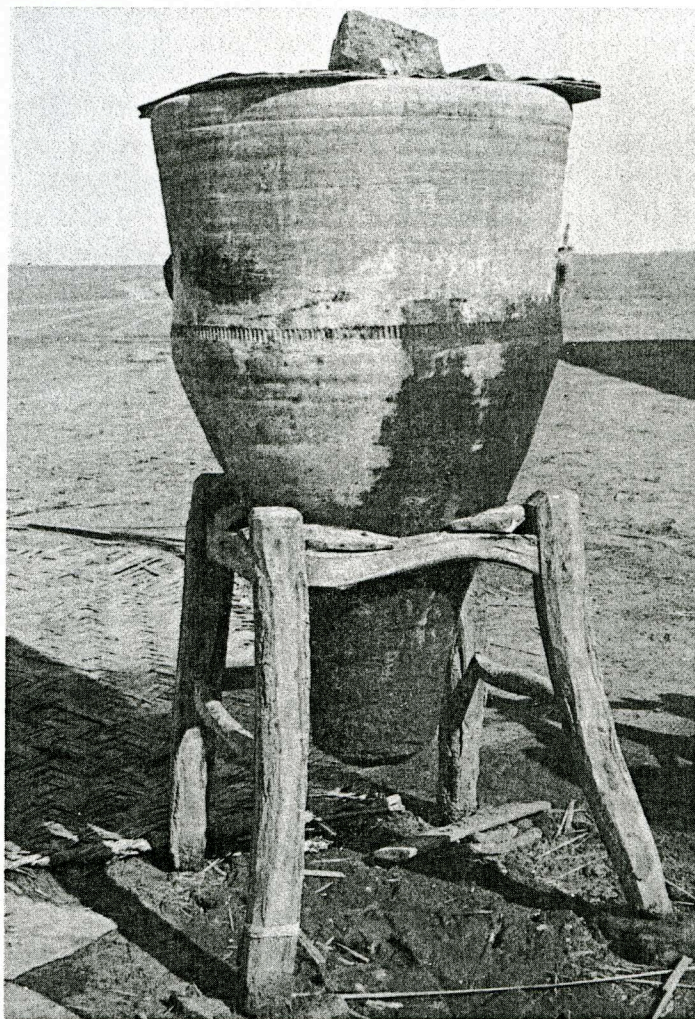


Plate 2.



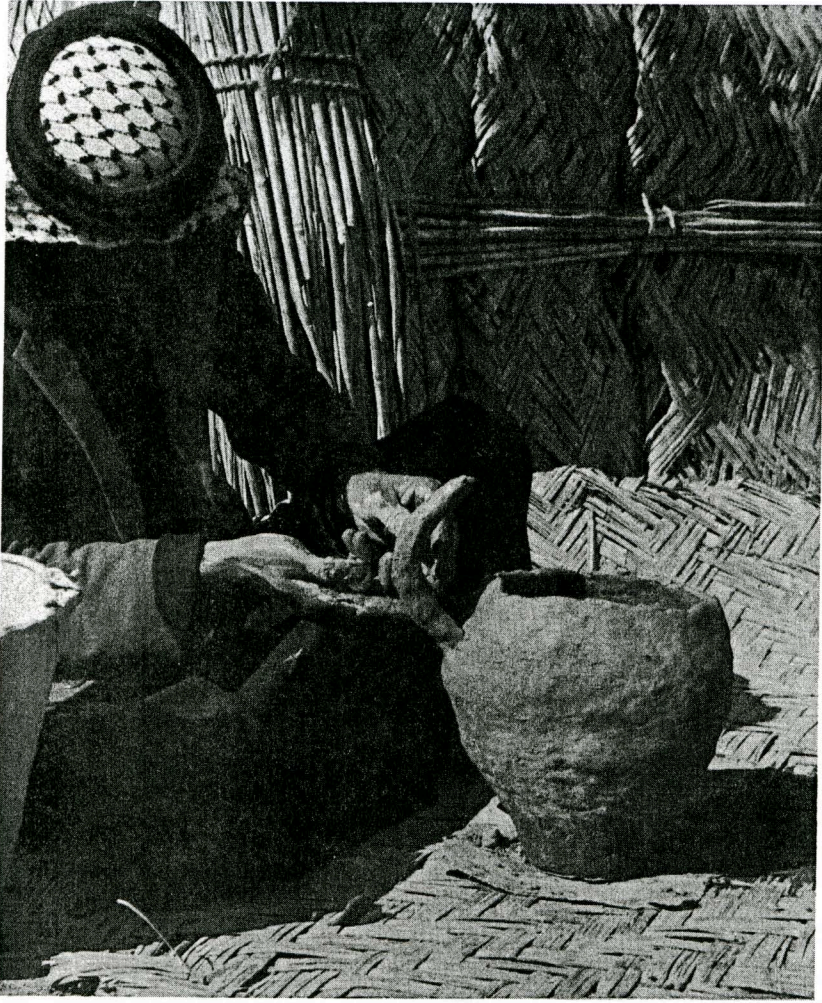


Plate 3.



Plate 4.