

## CHAPTER EIGHT

# FE(MALE) POTTERS AS THE PERSONIFICATION OF INDIVIDUALS, PLACES, AND THINGS AS KNOWN FROM ETHNOARCHAEOLOGICAL STUDIES

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### Introduction<sup>1</sup>

Over the past century of archaeological research in the Middle East, as every place else in the New and Old Worlds, the challenge to create a relative chronological order for deposits at ancient sites was resolved by establishing ceramic sequences. Scholars began by recognizing large-scale similarities of pottery assemblages at different sites, as they pertained to texture, color, vessel morphology, decoration, and the presence/absence of accessories. The primary goal was to unite contemporaneous artifacts found within and among sites. Success demanded an emphasis on the homogeneity of pottery within a given time period and to a lesser extent, heterogeneity within time periods.<sup>2</sup> The result is excellent regional ceramic typologies, but lacking are links between each period both in terms of technology and with regard to the people who made the pots. An

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<sup>2</sup> G. A. London, *Decoding Designs: The Late Third Millennium B.C. Pottery from Jebel Qa'aqir* (Ph.D. diss., University of Arizona), 35.

emphasis on homogeneity between sites obscures details relating to individual potters and workshops.

Given that much is now known about temporal changes in pottery, the present task of archaeologists is to acknowledge small-scale differences, rather than similarities, within individual sites and among contemporaneous sites. Instead of peoples or ethnic groups, the objective is the individual or the workshop. From the perspective of ceramic technology, one can begin to define these entities by reference to an underutilized but abundant artifact – ordinary, plain pots. Archaeology can be less elitist than text studies tend to be, especially if the focus is on utilitarian wares rather than the small percentage of decorated pots. There is every reason to imagine that some potters so identified will be women.

Superficial attributes sometimes suffice for characterizing and naming decorated wares, but can fail with regard to undecorated utilitarian wares unless such wares were made in different ways (wheel thrown or coil built, pinch, mold-made, and so forth). Variation within a class of pots, say cookware, can reflect the fact that the artifacts were made by different people in different and distinct (contemporaneous or not) traditions or in distinct and unrelated times. Archaeologists name wares that are easily differentiated from others, usually due to decoration or surface treatment, despite their relative minority in the overall assemblage. W. G. Dever<sup>3</sup> recognizes the need to focus on technology rather than ideology, an issue H. J. Franken<sup>4</sup> has advocated. If, as with the traditional domestic potters and craft specialists of today, some of the ancient potters were women, the analysis of ceramic technology will offer insights into the roles of women in antiquity.

## Ceramic Technology

The goals of the study of ceramic technology are to learn how pots were manufactured and used, and to provide evidence about the makers and users. An emphasis on the individual contrasts with the concept of attributing artifacts to a group of people named in the Hebrew Bible or

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<sup>3</sup> W. G. Dever, "Will the Real Israel Please Stand Up? Archaeology and Israelite Historiography: Part I," *BASOR* 297 (1985): 75, fn.7.

<sup>4</sup> H. J. Franken, *Excavations at Tell Deir 'Alla: The Late Bronze Age Sanctuary* (Louvain: Peeters Press, 1998); H. J. Franken and J. Kalsbeek, *Excavations at Tell Deir 'Alla I* (Leiden: Brill, 1969); idem, *Potters of a Medieval Village in the Jordan Valley: Excavations at Tell Deir 'Alla—A Medieval Tell, Abu Gourdan, Jordan* (North Holland Ceramic Studies in Archaeology 3; Amsterdam: North-Holland; New York: American Elsevier, 1975).

other texts. Normally, pottery is designated with reference to decorated wares. Often, painted or burnished pottery represents a small quantity of the total assemblage and may have been used by only a narrow segment of the population. As such, both the wares and their users represent a thin slice of ancient society. Fine wares provide some chronological anchor for the entire assemblage, but plain wares best encode information about the potters and their traditions. While it was appropriate and necessary that early research concentrate on decorated wares, the undecorated common, normal wares that address non-chronological issues related to the identity of local people are central to learning about those people who made and used them. There is a good chance that both the makers and the users were women.

The study of ceramic technology focuses on people, and on the craft of manufacturing containers often used for food, which suggests use (if not manufacture) by women. Once more is known about pot makers, it becomes possible to extrapolate to pot users. Artifacts constructed from flexible raw materials such as fibers, fabrics, hair and clay can preserve tangible references to the individuals who made them. Organic perishable plant and animal products can embody stylistic and manufacture evidence indicative of the group and the individual craftsman. Both the technical and individual stylistic patterns in baskets, wood, clothes and textiles, displayed in color and design elements, encode important social information such as village affiliation.<sup>5</sup> Unfortunately, perishable organic materials rarely survive in deposits located in the Middle East due to environmental conditions. However, when they do survive, they preserve information on, for example, the direction of the weave. At Timna in Israel's southern Arava, coarse tenting fabrics were characteristic of the Z-twist traditions of the Syrian coast and Bedouin communities rather than of the S-weave of Egypt, and are thus associated with a non-Egyptian element of the desert population.<sup>6</sup>

Stone artifacts, including utilitarian basalt and chert, as well as semi-precious stones used for seals, can reveal the work of an individual or a tradition of gem carving. Clay, however, is the single most abundant and malleable raw material used in antiquity. It was widespread and free for the taking. It could have been used by a cross-section of the population, male and female, young and old. Of all the plastic raw materials, only clay

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<sup>5</sup> S. Weir and S. Shahid, *Palestinian Embroidery*, 2<sup>nd</sup> ed. (London: British Museum, 1989), 19-22; E. W. Barber, *Women's Work: The First 20,000 Years* (New York: Norton, 1995).

<sup>6</sup> A. Sheffer, "Comparative Analysis of a 'Negev Ware' Textile Impression from Masos," *TA* 3 (1976): 85, fn.7.

transforms into a virtually indestructible rock. Initially soft to the touch, it fires rock-solid and is the most abundant artifact at many sites. In the stylistic and technical aspects of their manufacture, clay pots, tablets and figurines preserve data about the individuals who made them. Decorative styles on pottery can mimic those found on cloth. For example, embroidery work and lace patterns might be observed in incised or painted pottery. Checkerboard or grid patterns are more easily woven into fabrics of various colors and threads, or into basketry, and could be the origin of comparable patterns incised into pottery. Of all ancient artifacts, ceramics best preserve emblems and design features once found on perishable fabrics.

### **Learning Framework**

Artifacts made from clay and perishable materials result from a set of learned practices. Potters do not reinvent their craft repeatedly. Instead, it is based on knowledge acquired, accumulated, and advanced from one generation of practitioners to the next. Often, learners acquire skills from several people. Assistants and apprentices, who may or may not be related to the skilled worker, help older individuals who thereby transmit their expertise. Alternatively, younger people learn informally through the observation of their elders or other relatives. They also learn by observing as experts instruct others. Mothers, aunts, sisters, grandparents, friends and neighbors can all be involved in teaching girls.<sup>7</sup> Fathers, uncles, grandfathers, brothers and employers might teach boys.

The accumulated knowledge and learned behaviors, including where to dig clay, how to process it, and how to shape and finish and fire pottery, assure continuity of tradition. Essential elements of pottery fabrication can be passed down with little change in primary forming techniques. In contrast, the individual imprint of each potter can be expressed in non-essential features, such as secondary forming and finishing work. For example, when knobs, handles or other plastic features are typical of a particular tradition, their precise shape, location and number can vary from potter to potter. Similarly, surface finish and decoration might vary subtly

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<sup>7</sup> I recently observed young women at the Kornos Pottery Cooperative, who were learning to make pottery. In June 2008, experienced potters gave verbal instructions and encouragement, as did other “learners,” all of whom had relatives who were formerly potters but are no longer alive. As a consequence, the young women learned from the experienced women, who include mothers-in-law, neighbors, and friends. At times, an older potter sat at the turntable of a learner, in order to demonstrate how to fix and save a pot.

from person to person without harming the tradition. All these features relay information about individual potters. Incised combed patterns or painted patterns, including the number of combed bands and their arrangement, are not random. When analyzed quantitatively, surface treatment becomes consequential on its own. It means something, but not to everyone and not the same thing to everyone. Pattern details are meaningful to those who know and recognize them. As E. T. Hall noted, "A pattern is a meaningful arrangement of sets shared by a group."<sup>8</sup> Subtle variations offer opportunities for expressing the identity and individuality of the potter and/or the painter.<sup>9</sup> The number of incised bands, thumb indentations, burnish patterning, or rows of stippling affords individuals a chance to express themselves while remaining true to their traditions.

Archaeologists encounter and record endless variety within each type of surface treatment. In assessing the debate on discerning ethnic identity from material culture, W. G. Dever concluded that artifacts vary sufficiently to permit archaeologists to observe differences, but the question of what those differences imply remains.<sup>10</sup> Especially in times when pottery was not wheel thrown, such differences are the muffled voices of individual potters, many of whom are women.

## Potter Gender

For Cyprus, evidence concerning female potters has been examined by relying on ethnoarchaeological studies of domestic and craft specialists worldwide, in conjunction with a small number of artifacts from Mesopotamia, Greece and Egypt.<sup>11</sup> These artifacts depict women performing some aspect of work associated with pottery production, either the primary forming work or the secondary finishing stages. For the past two centuries if not longer, women have made and continue to make pots,

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<sup>8</sup> E. T. Hall, *The Silent Language*, 2<sup>nd</sup> ed. (New York: Anchor Books, 1973), 125.

<sup>9</sup> London, "Decoding Designs," 244; idem, "Ethnoarchaeological Evidence of Variation in Cypriot Ceramics and Its Implications for the Taxonomy of Ancient Pottery," in *Cypriot Ceramics: Reading the Prehistoric Record* (eds. J. Barlow, D. Bolger, and B. Kling; Philadelphia: University Museum of Archaeology and Anthropology, 1991), 221-35.

<sup>10</sup> W. G. Dever, "Archaeology, Ideology, and the Quest for an 'Ancient' or 'Biblical' Israel," *NEA* 61 (1998): 46-8.

<sup>11</sup> V. Hankey, "The Ceramic Tradition in Late Bronze Age Cyprus," *RDAC* (1983): 168-71; G. A. London, "Cypriote Potters: Past and Present," *RDAC* (1987): 319-22.

which they later sell. To do this, they mine and process clay, gather fuel, and produce and fire pottery.<sup>12</sup> Although women have the ability to carry out all of the activities required for pottery manufacture, there are numerous case studies, which show that the work is divided among family members. At times, women make the pots and men are more concerned with fuel, firing, and sales. In Cyprus early in the twenty-first century, some traditional rural female potters remain involved with all aspects of the work, including the backbreaking work of beating the clay. Men can be involved with any or all aspects of the work.<sup>13</sup>

Despite the work of potters in antiquity, evidenced by the vast quantities of pots and sherds unearthed, archaeologists find surprisingly few kilns throughout the eastern Mediterranean. Potter gender might contribute to the dearth of pottery production locations, since ethnographic studies show that women in traditional societies tend to work closer to home than do men. At home, women can make objects for sale while they tend to all their other obligations and responsibilities, prime among them being childcare.

In Cyprus as elsewhere in the world, pottery making is part of the work routine woman carry out seasonally, while caring for children and elders, cooking, washing clothes, weeding and more. Female craft specialists making pottery in the Filipino village of Gubat (southeastern Luzon Island) work in spaces around their homes. Some carry the drying pots indoors at night and learn to live around their pots, but some might have a shelf under their house where pots dry, protected from the rain.<sup>14</sup> One of Gubat's most prolific potters enjoyed the luxury of a covered porch. In Cyprus, too, private potters who work in the courtyards of their homes lack storage space for drying pots. Consequently, they bring them inside, to their bedrooms, kitchens, and wherever else the pots can be moderately safe from children and pets. If women in antiquity were responsible for making pottery, and they carried out the work in the confines of their house exteriors or courtyards as they undertook myriad other daily and seasonal chores, it will be difficult for archaeologists to recognize pottery production areas.

The seasonality of the industry, normally limited to the drier summer through autumn months, also contributes to the dearth of easily

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<sup>12</sup> G. A. London, *Women Potters of Cyprus* (DVD filmed, edited and narrated by G. A. London, 2000).

<sup>13</sup> Ibid.

<sup>14</sup> G. A. London, "Standardization and Variation in the Work of Craft Specialists," pp. 182-201 in *Ceramic Ethnoarchaeology* (ed. W. A. Longacre. Tucson, Ariz.: University of Arizona Press, 1991), fig. 9.6.

identifiable pottery production locations, even as it allows women to use pottery making space, as needed, for other seasonal activities. In Cyprus, the same area used by private potters to make pottery easily converts to space for food preparation, olive sorting, cleaning and processing, dairy processing, fruit preserving, animal sheltering and more. The multi-functionality of the workspace similarly makes it more difficult to determine where ancient pottery production took place, unless the ancient site was destroyed during the dry (pot-making) season. My visits to pottery production locations during the wet winters, early spring and late fall, reveal remarkably little, if any evidence that potters worked there.<sup>15</sup>

If ancient craft specialists were women who worked at home, seasonally and in between all their other chores, there is little chance of finding their clay, tools or pots. In modern Cyprus, everything related to pottery production, even the shallow, wooden container (*skafi*) for mixing clay powder with water, vanishes. (Indeed, instead of a pre-formed box, a *skafi* can be made of pieces of wood held together by clay.) The Kornos Pottery Cooperative has a workspace, including a kiln (*kamini*), in a location separate from the homes of the craft specialists. Close to a stream and to where other potters reside, eight women worked at the Coop during the summer months. In the winter months, the Coop is converted into a place to store unwanted large objects and sacks of potatoes belonging to their neighbors. In springtime, it is used to hatch chicken eggs, under the watchful eye of the women potters. Discarded pots are absent; there were no sherds to be found during the winter months of 1999–2000. The rate of loss in kiln firing is no more than 2 percent at Kornos, and all misfired pieces are reused one way or another, often away from the kiln area.<sup>16</sup>

The multipurpose use of space in ancient households limits our ability to identify ancient pottery-making sites unless they were destroyed in the dry season. At the same time, if the craft was practiced in the confines of courtyards, it is more likely that pot making was the work of women. This conjecture is supported by ethnographic research demonstrating that women are more likely than men to remain close to home.<sup>17</sup> To some extent, the sparse number of separate Bronze and Iron Age industrial settings, where men and/or women might work, can be explained by the prominent role of women potters. Instead of relocating daily to a separate

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<sup>15</sup> G. A. London, "Continuity and Change in Cypriot Pottery Production," *NEA* 63/2: (2000): 103.

<sup>16</sup> G. A. London, "Past Present: The Village Potters of Cyprus," *BA* 52/4 (1989): 221, 224.

<sup>17</sup> G. P. Murdock and C. Provost, "Factors in the Division of Labor by Sex: A Cross-cultural Analysis," *Ethnology* 12 (1973): 203-25.

workspace, they would have worked within range of the cooking fire as well as the pottery kiln. Instead of assuming that pottery manufacturing sites would have been outside ancient village and urban sites, perhaps the dearth of industrial sites suggests that pottery was made by women (and men) close to home.

### **Fingerprint Identification: Male/Female or Child/Adult**

Despite potters' attempts to eradicate any trace of their hands or fingers from clay vessels, meticulous inspection sometimes reveals a small number of prints. W. F. Badé, the early excavator of Tell en-Nasbeh, pioneered research strategies designed to focus on people rather than pottery. He brought fingerprints from ancient pots to the attention of a police detective, with the aim of determining the gender of potters.<sup>18</sup> More recently, P. Åström and S. A. Eriksson assembled a collection of fingerprints from ancient Cypriot wares.<sup>19</sup>

A recent fingerprint analysis of archaeological material from North America concluded that print dimensions make it easier to discriminate between children and adults than between men and women. The dermatoglyphic patterns of finger ridges are established by the seventh month of fetal development. As an individual grows, ridges on the fingers and palms alter only in size; as hand size increases, so too does the distance between each ridge. Consequently, it is the distance from ridge to ridge that expands, rather than the number of ridges. Larger distances between ridges typify the prints of adults whereas closer ridges are indicative of children. At the same time, for each person, there are differences from finger to finger and hand to hand. Although the ridges of male fingerprints in certain populations are larger than those of females, the distinction can be as small 0.02 mm. Variations in the size of ridge breadth are better evidence of regionalism than of sex difference, due in part to differences in average height. Certain ethnic communities tend to have fewer but wider ridge distances in hands similar in size to hands with more ridges. As a consequence, one can currently segregate prints based on age or height with greater efficacy than on sex.<sup>20</sup>

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<sup>18</sup> W. F. Badé, *A Manual of Excavation in the Near East* (Berkeley: University of California Press, 1934), 35.

<sup>19</sup> P. Åström and S. A. Eriksson, *Fingerprints and Archaeology* (Studies in Mediterranean Archaeology 28; Goteborg: P. Åströms, 1980).

<sup>20</sup> K. A. Kamp, N. Timmerman, G. Lind, J. Greybill, and I. Natowsky, "Discovering Childhood: Using Fingerprints to Find Children in the Archaeological Record," *American Antiquity* 64 (1991): 309.



A study of fingerprints found on two different classes of clay artifacts from northern Arizona, animal figurines and corrugated pottery, primarily identified the prints of children. On the crudely made figurines, some associated with child burials but more with fill deposits, print ridge distance averaged 0.37 mm. In contrast, the breadth of fingerprint ridges on the pottery measured an average of 0.49 mm, which was indicative of adult-sized hands. Occasionally, a poorly made corrugated pot preserved child-sized prints, suggesting that it represents the work of a learner rather than the more skilled product of a full-fledged (adult) potter. Additional evidence supporting the idea that the figurines were made by children is found in the imprecise representation of the zoomorphic forms onto which the legs and tails were poorly attached. These stylistic and fabrication details, as well as provenance, imply that children made the figurines as toys.<sup>21</sup>

Clay toys made by and for children are more likely to preserve fingerprints than is most pottery, since skilled potters systematically eradicate all evidence of manufacture, whereas children do not. A smooth, even, unblemished surface on the interior and exterior of a pot is one measure of a good pot, according to traditional potters interviewed in ethnoarchaeological studies carried out in the Philippines and in Cyprus.<sup>22</sup> An exception to this is the corrugated ware of the American Southwest, for which the fingertip creates each corrugation in clay dry enough to preserve the finger ridge impressions. Similarly, moderately dry clay tablets of the ancient Near East are more likely to preserve prints than is pottery, and thus can inform if a tablet belonged to a student learner or an adult unaccustomed to writing. Double prints on tablets or pottery represent the work of multiple individuals. For pottery, more than one set of prints hints at assembly line production involving a skilled potter and assistants. Small prints at handle attachment points can represent the work of a younger assistant who was responsible for handle application. If shaping the pot was the responsibility of the experienced potter alone, no other set of prints might be discernible.

Non-skilled laborers, apprentices, family members, or others participate in the pottery industry in various capacities. They might collect raw materials (clay, temper, water and fuel), process clay into a workable material, or move pots between worktables and drying spaces. They might add accessory pieces (spouts, handles and plastic decoration), as do Egyptian potters working in Jordan, or surface treatment (burnishing,

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<sup>21</sup> *Ibid.*, 313.

<sup>22</sup> London, "Decoding Designs," 189-214; *idem.*, "Cypriote Potters;" *idem.*, "Regionalism;" *idem.*, "Continuity and Change," 102.

painting, scraping and more), as in the Philippines.<sup>23</sup> In Cyprus, Jordan and the Philippines, every hand available helps to unload the kiln. Kiln loading, nerve-racking and risky, remains a task for experienced hands.

## Primary Forming and Secondary Finishing Techniques

Essential to the potting tradition is the *primary* forming and shaping of wet clay by a skilled potter. This early stage of the work embodies knowledge passed down from one generation to another, from relative to relative or neighbor to neighbor. It is less subject to chance or the whim of an individual potter than are the *secondary* finishing work and surface treatment. To a great extent, the raw materials dictate the manufacturing technique and limit the degree of experimentation and individuality. Good clay for one potter is bad clay for another. For potters who have a good experience working with and firing a particular clay, there is no reason to explore other manufacturing techniques with the same clay. In a practice which seems to exist worldwide, potters prefer to use a manufacturing technique suitable to the clay readily available rather than try to fix the clay by adding rocks or minerals, other than carbonates added to cooking pot wares.

Differentiating between the primary forming and secondary finishing techniques used to create the pottery helps to determine in what ways a potter or a person of lesser skill is involved in the manufacture. Nearly all pots made using a traditional technique require more than one stage; *i.e.*, a lump of clay will not be given its final form as a bowl, jar, or other vessel during a single pot-making episode. Instead, it will undergo a slow and gradual metamorphosis. Round-bottomed pots might initially have flat bases; jars might start out as bowl-like, and so forth. Pinch pots alone can be shaped all at once in the hand, with or without subsequent surface treatment such as paint or burnish. However, they are limited in size by the length of the potter's fingers.

Shaping a pot requires greater skill and knowledge than that needed for final finishing, smoothing and decorating, or indeed for any task other than vessel forming. Accessory pieces are normally added once the pot has dried enough to support the weight of the handle, spout, knob, plastic

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<sup>23</sup> G. A. London and M. Sinclair, "An Ethnoarchaeological Survey of Potters in Jordan," pp. 420-28 in *Madaba Plains Project II* (eds. L. G. Herr, L. T. Geraty, Ø. S. LaBianca, and R. W. Younker; Berrien Springs, Mich.: Andrews University, 1991), 422-25; G. A. London, "Standardization and Variation in the Work of Craft Specialists," pp. 182-201 in *Ceramic Ethnoarchaeology* (ed. W. A. Longacre. Tucson, Ariz.: University of Arizona Press, 1991), 192-95, fig. 9.9.

molding or figurines, or to allow holes to be cut into the clay. These tasks are often considered less essential to the integrity of the pot than is shaping or forming a pot to the correct size and proportions.

After a pot is shaped by an experienced traditional potter, it is set aside to dry slightly, before either that potter or someone else resumes work on it. If more coils are need to increase the vessel height, if the base needs trimming, or if any other work essential to the basic form, size and shape is necessary, the potter continues the work. Most potters find it beneficial to work in an interrupted technique of manufacture, regardless of the precise way in which they make pottery, whether thrown or other. Rather than wheel throw a final finished form, many ancient and modern traditional potters build pots incrementally. They might start a pot from a lump of clay to which coils are added, and then set it aside to dry before adding additional coils. According to this technique, the lower body is made first and a few coils are added. Then the pot is set aside to dry for minutes, hours or days, depending on the weather and the other duties for which the potter is responsible, in the field and at home. Coils might be added in one or several stages, depending on the desired height of the pot and the rate of drying. After the neck and rim are fashioned, another drying period follows before the base can be treated to receive its final form.

Traditional craft specialists observed in Jordan, Cyprus and the Philippines vary the number of pots in progress depending on the rate of drying, the weather, the type of additional work required, and the proximity to the appointed firing time. Most maintain a variety of pots requiring different types of reworking and additional work. They benefit from operating in a limited, slow-paced “assembly line production,” working on a series of pots and carefully planning how many pots in progress they can maintain. When they begin with the initial stage of production for ten cooking pots, there might be another ten drying and awaiting shaping or surface treatment. Yet another ten might be finished except for the base formation. Considerable skill is required to balance the number of pieces in progress. The weather, unpredictable at times, impacts the drying rate. If pots are drying at a faster than anticipated due to elevated air temperatures, potters might enlist the help of unskilled workers on an *ad hoc* basis. These might be any family member, whether a child, spouse or adult relative. In such an instance, one might find two sets of fingerprints on a single pot, or some other indication of multiple hands.

Incised, indented and rouletted patterns always represent the work of the person who shaped the pot, since such surface treatment must be rendered in the wet clay. Some professional potters regularly plan for the

participation of the unskilled to contribute to their work on drying pottery. Children, apprentices, or assistants might be recruited to add handles, and to decorate pottery by painting, burnishing or glazing. As a consequence, pots might have the prints of multiple people, as do those of Indian potters of Rajasthan.<sup>24</sup>

Clay texture determines surface treatment but within a particular pottery tradition, social factors rather than raw materials determine the precise surface treatment and there is room for personal expression. Social norms might require that a pot have a painted metopic decoration on the shoulder alone, but within this parameter the painter is free to choose the precise patterns, brush width and density of the decoration. An oven might require holes in the base into which the ashes fall, but the number of these functional holes varies from potter to potter or assistant to assistant, thereby representing the work of the individual who carved them. In the Filipino community of Paradijon, craft specialists create no fewer than four types of stoves, each associated with a particular type of fuel (one each for sawdust and wood, and two for charcoal burning). Potters and their spouses carve different numbers of holes into the bottom of stoves, thereby making it possible to differentiate the work of the potter and her spouse.<sup>25</sup> The ability to distinguish between the work of two people involved with the manufacture of a single vessel informs on manufacturing techniques and the organization of the pottery industry that involves an assembly line, regardless of how limited it might be.

At Paradijon, another feature indicative of both a learning framework and of diachronic changes in pottery manufacture is the finger indented and raised band of clay on the charcoal burning warming oven (*kalan sa oring*). The band surrounds the midpoint, where two coil built sections join together. In addition, the rim shows carefully and regularly placed finger indentations. These patterns represent the work of the potter rather than anyone else, since they are impressed in the still wet clay, which is handled by the potter alone. Each potter displays her own unique style in the number and pattern of these indentations. The design, arrangement and number of indentations are most similar for mothers and daughters, and for pairs of sisters. In direct contrast are holes cut into the stove floor to enable ashes to fall down to the lower level. The holes are cut into drying clay, either by the potter or by a helper. The precise number of holes is unimportant and their arrangement depends on personal preference. If a

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<sup>24</sup> C. Kramer, *Pottery in Rajasthan: Ethnoarchaeology in Two Indian Cities* (Washington, D.C.: Smithsonian Institution Press, 1997), 69.

<sup>25</sup> London, "Standardization and Variation," 192-200.

husband cuts the holes into stoves made by his wife, his pattern will differ from that of his wife without altering function or use.<sup>26</sup>

Burnishing is a facet of surface treatment that a non-professional can perform, thereby releasing the practiced potter for the primary, essential forming work that requires specialized skill. Burnishing is work best carried out on clay that is partially dry. Although burnish strokes leave no fingerprints, burnishing has the potential to introduce variability into the work of the individual potter. If a potter burnishes some pots, but someone else burnishes others, pots of the same dimensions and proportion might have entirely different burnishing patterns. Pots made by the Paradijon craft specialists vary in dimension by some six percent whereas those made by domestic potters who occasionally sell or barter pottery show less standardization and vary by about twelve percent.<sup>27</sup> On pottery of the Bronze and Iron Ages in Israel and Jordan, burnish patterns vary in their distribution, arrangement, width length and frequency. A precise study of vessel dimensions and diverse burnish patterns on the large platters of the Early Bronze II holds the key to the organization of the ceramics industry of the Early Bronze Age. It would have been easy for someone other than the potter to burnish these mold-made platters because the work was done while the platter was still supported by a sturdy exterior mold.<sup>28</sup>

## Ceramic Technology and Identification of Individuals

With pottery (whether funerary or domestic) dating to a single time period, one can differentiate among the work of contemporaneous potters whose wares were deposited at a site. Studies of ceramic technology and ethnoarchaeological data allow researchers to use the same criteria as traditional potters use today to identify the products of individual potters working within a single traditional of pottery making.

Each clay body has unique requirements and limitations. Potters learn to work the clay in a manner that accommodates both the clay and their clientele. Whereas clay and manufacturing techniques will be shared precisely and reflect the “conservative” nature of potters, nuances in technique and especially in decoration allow each potter to individualize (whether subconsciously or not) his/her pots. These subtle signs can be deciphered by other potters and by interested archaeologists. Braudel

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<sup>26</sup> Ibid., 203.

<sup>27</sup> W. A. Longacre, “The Pottery of Paradise,” *Sarabibon* 4 (2005): 108.

<sup>28</sup> G. A. London, “The Organization of the Early Bronze II and III Ceramics Industry at Tel Yarmuth: A Preliminary Report,” pp. 117-24 in *Yarmouth I* (ed. P. de Miroschedji; Paris: Éditions Recherche sur les Civilisations 1988), 120-22.

described material culture as “the repeated movements, the silent half forgotten story of men [*sic*] and enduring realities, which were immensely important but made so little noise.”<sup>29</sup> Ceramic ethnoarchaeology articulates the marks preserved in clay. They are the sounds of potters, female and male, and their assistants.

Archaeologists occasionally identify several ceramic finds representative of a single potter, using objective criteria based on experience with the wares, as well as subjective, intuitive criteria.<sup>30</sup> Such identification is facilitated if the pots bear an elaborate design pattern. Ethnoarchaeological research provides objective methods of differentiating the utilitarian wares of contemporaneous potters. The same criteria that enable traditional potters in diverse cultural settings to recognize the work of their fellow potters should enable archaeologists to separate contemporaneous ancient wares according to potter and/or workshop. Ethnoarchaeological research demonstrates that the wares of potters working without electrical wheels and kilns, producing pottery for local use and not for a tourist market, can be sorted by collecting quantitative data on vessel attributes. Such data primarily relates to overall vessel proportions and decoration and, when considered in conjunction with studies of manufacturing techniques, enable researchers to distinguish the work of different potters whose wares are found at a single site.

The work of individual potters can be discerned among the Kalinga domestic potters in northern Luzon Island, the Paradijon craft specialists in southern Luzon Island and the traditional potters of Cyprus.<sup>31</sup> Potters in these three settings, quite distant from each other, make utilitarian forms for sale to local people. They also use the pots themselves and occasionally carry one away from the province to present as a gift. In the Filipino communities, paddle and anvil, as well as coiling techniques, prevail. In Cyprus, coiling is the norm for potters in lowland and Troodos

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<sup>29</sup> F. Braudel, *Capitalism and Material Life, 1400-1800* (trans. M. Kochan; New York: Harper Colophon, 1975).

<sup>30</sup> E. Herscher, “Beyond Regionalism: Toward an Island-wide Early and Middle Cypriot Sequence,” pp. 45-50 in *Cypriot Ceramics: Reading the Prehistoric Record*, (eds. J. A. Barlow, D. R. Bolger, and B. Kling; Philadelphia: University Museum of Archaeology and Anthropology, 1991), 46.

<sup>31</sup> W. A. Longacre, “Kalinga Pottery: An Ethnoarchaeological Study,” pp. 49-66 in *Pattern of the Past: Studies in Honor of David Clarke* (eds. I. Hodder, G. Issac, and N. Hammond; Cambridge: Cambridge University Press, 1981), 62; W. A. Longacre, “Sources of Ceramic Variability among the Kalinga of Northern Luzon,” in *Ceramic Ethnoarchaeology*, (ed. W. A. Longacre, Tucson, Ariz.: University of Arizona Press, 1992), 95-111; London, “Decoding Designs,” 208-15; idem, “Standardization and Variation;” idem, *Women Potters of Cyprus*.

Mountain villages. In case studies in each of these three geographically distinct areas, potters were successful at identifying the maker of a specific pot. They consistently relied on the same combination of vessel features, which include aspects of manufacture and finish, overall vessel proportions, wall thickness, and, perhaps of least importance, decoration.

Archaeologists can employ these same criteria with confidence to identify the work of ancient potters, as has been demonstrated for Early Bronze IV domestic and funerary wares from Jebel Qa'agir.<sup>32</sup> Jars found together in tombs proved to be the work of the same potter, and they differed in vessel proportion and decoration from jars found in other tombs. This is true for nondescript jars found by the hundreds in the Jericho tombs of the late third millennium B.C.E. Even for an undecorated container with a flat base and no handles, knobs, decoration or surface treatment, it was possible to determine which were the vessels of the same potter. Tombs containing many jars and the remains of male and female community elders held the work of more than one potter.<sup>33</sup> When assessing these results for their social implications, it is important to ask whether the pots and other funerary offerings were the gifts of many individuals paying homage to male and female elders, or the contribution of a single donor who collected pots from different potters.

### **Ethnoarchaeological Field Work among Craft Specialists: 1981, 1986, and 1999–2000**

My ethnoarchaeological research into traditional potters in Cyprus began in 1986, to follow up on the earlier study of R. Hampe and A. Winter.<sup>34</sup> It was also designed to build on my 1981 fieldwork project among the Filipino potters of Paradijon, done while a student of W. A. Longacre.<sup>35</sup> This fieldwork enabled me to observe and record the criteria that two groups of craft specialists, separated by thousands of miles, used to differentiate among the work of individual potters. At that time, I recorded the work of twenty-five Cypriote potters, a quarter of whom were

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<sup>32</sup> London, "Decoding Designs," 219-48; idem, "Identification of Individual Potters Past and Present," in *Contributions to the Study of Pottery Technology* (n.ed., Publicatie van het Gallo-Romeins Museum 34; Tongeren, Belgium: Provinciaal Gallo-Romeins Museum, 1987), 58-74.

<sup>33</sup> Ibid.

<sup>34</sup> R. Hampe and A. Winter, *Bei Töpfern und Töpferinnen in Kreta, Messenien und Cypern* (orig. 1962; Mainz: Philipp von Zabern), 1976.

<sup>35</sup> Longacre, "The Pottery of Paradise."

still producing pottery in 1999–2000.<sup>36</sup> They live in three different villages: the lowland villages of Kornos and Ayios Dimitrios (Marathasa, Troodos Mountains), and Kaminaria, also in the Troodos range. Their single manufacturing technique, coiling pottery, practiced in both the lowland and mountain communities, has changed, but almost imperceptibly, over the course of fifteen years; it is in the decorative elements that this change can be seen.

In 1986, I recorded the precise incised patterns of each of the five Ayios Dimitrios potters and those of the nearly twenty in Kornos. In addition, their combed tools were measured for width and number of teeth. Nuances in manufacturing were documented. Despite a fairly uniform manufacturing technique, subtle differences in the details of handle and decoration application helped to differentiate the product of each woman. In Kornos, potters added the handle after the decoration and thus it invariably smudged or erased part of the incised or roulette pattern. This small detail alone allowed me to classify the work of the lowland versus the mountain village potters. Other differences include the shape of cooking pot lids and the overall vessel proportions. Taken as a whole, they make it possible to distinguish pots made by different potters within and among villages. However, the vast majority local people, who might use the containers in Cyprus, do not distinguish between pots made in the different villages. Most non-potters within the pottery-producing villages cannot identify the work of each potter, yet the potters can and do, using the exact same criteria, as had the Filipina potters.

To examine changes over time for Kornos pottery, I recorded pre-1986 pots visible in the courtyards of two Kornos private potters, who are not members of the Cooperative. (At that time, there was no collection of traditional pottery in Cyprus, although there is at the present.) The courtyard collections were among the only accumulations of pottery in the entire village, where the potting tradition can be traced back 200 years.<sup>37</sup> For one senior potter over age sixty, 92 percent of the older decorated pottery displayed a roulette pattern. When considering all the pots (n=25), undecorated and decorated, 70 percent (all but two) had an incised roulette pattern. In 1986, this potter's signature pattern remained the rouletted design. In the courtyard of a second private potter, the twenty-seven pots

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<sup>36</sup> London, "Regionalism;" idem, "Potters in Cyprus: Twelve Years Later," *Department of Pottery Technology Newsletter* 16/17 (1998/1999), "Continuity and Change," 105.

<sup>37</sup> G. A. London, F. Egoumenidou, and V. Karageorghis, *Traditional Potters in Cyprus* (Mainz: Philipp von Zabern 1989), 5.



made prior to 1986 included six (22 percent of the total) forms that are never decorated (ovens, beehives and so forth). Of the decorated pieces, 86 percent (n=18) had zigzag patterns identical to pots she fabricated in 1986.<sup>38</sup> In other words, both these private potters remained true to their signature patterns.

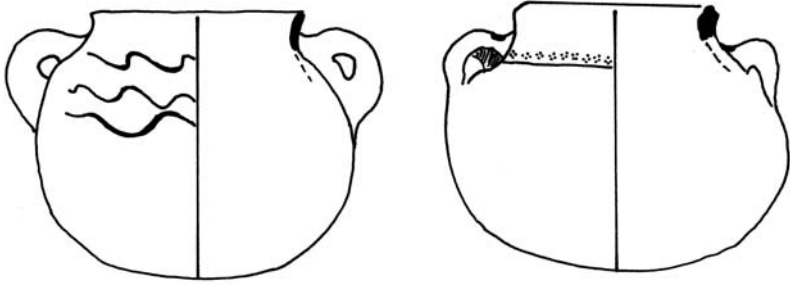
In 1986, I bought pots made by other Kornos potters, including many by members of the Kornos Pottery Cooperative. I put them away for a month and then asked people to identify who had made each pot, in a manner similar to that of Longacre in the Philippines. Potters, and normally only potters, could successfully identify the pot-maker by visually assessing overall vessel measurements, proportions and decoration. These attributes are the ones most often recorded by archaeologists, as well.<sup>39</sup> I then measured pots to determine whether I could sort the pots according to potter, using the same criteria the potters themselves use. To identify cooking pots and jugs made in 1986 in Kornos, Kaminaria, and Ayios Dimitrios, I measured overall vessel proportions and individual attributes, such as cooking pot circumference, rim thickness and diameter, height of pot and height at the maximum circumference.

To assess vessel morphology, I measured fifty-eight round-bottomed cooking pots of normal size, made by eight potters in Kornos, four in Ayios Dimitrios and the lone Kaminaria potter (Fig. 8-1). When plotted on a graph, two unrelated measurements, rim thickness and cooking pot circumference, showed a division between pots made in the mountains versus the lowland Kornos village (Fig. 8-2). For all but one potter, the circumference of Kornos cooking pots was substantially larger than that of the cookers from other villages. There was a small degree of overlap for some pots, which was easily clarified by incorporating one other feature unrelated to size but pertaining to work order: handle application. This is a routine stage of primary forming work that never varies (Fig. 8-3). When measured and plotted for vessel height and rim diameter, 44 jugs made in the three villages exposed an unambiguous separation according to the mountain and lowland traditions (Fig. 8-4). Additional information concerning the order of handle and decoration application reinforces our understanding of the division between two traditions operating at the same time, in the same country, under the same political and social conditions.

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<sup>38</sup> London, "Ethnoarchaeological Evidence," 226.

<sup>39</sup> Ibid.



**Fig. 8-1. Round-bottomed cooking pots. Illustration by author.**

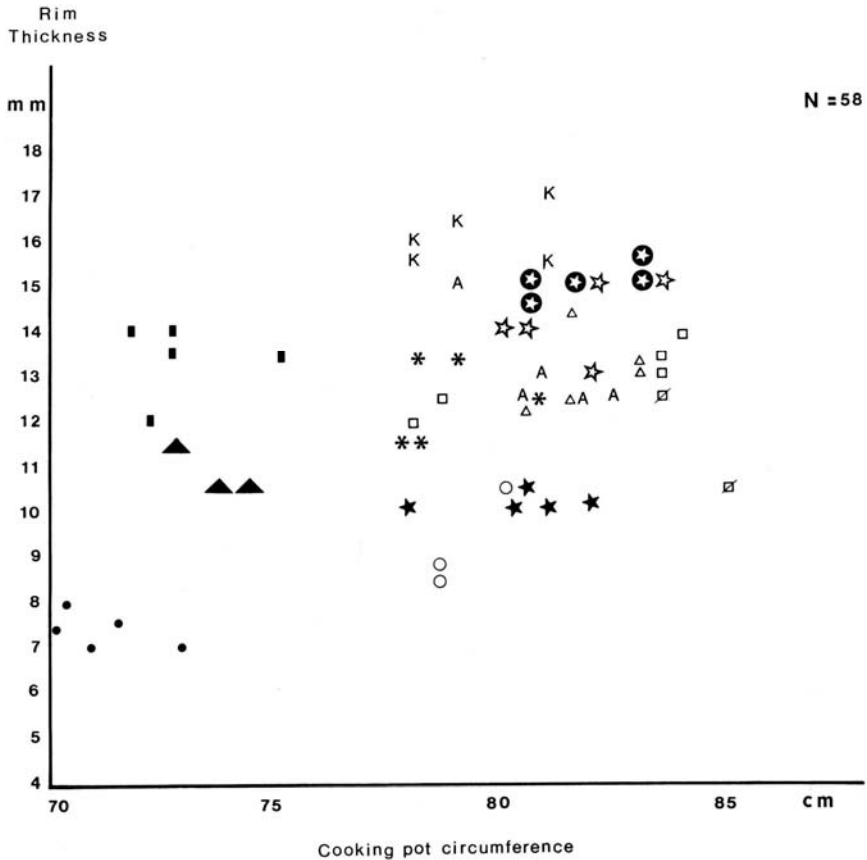
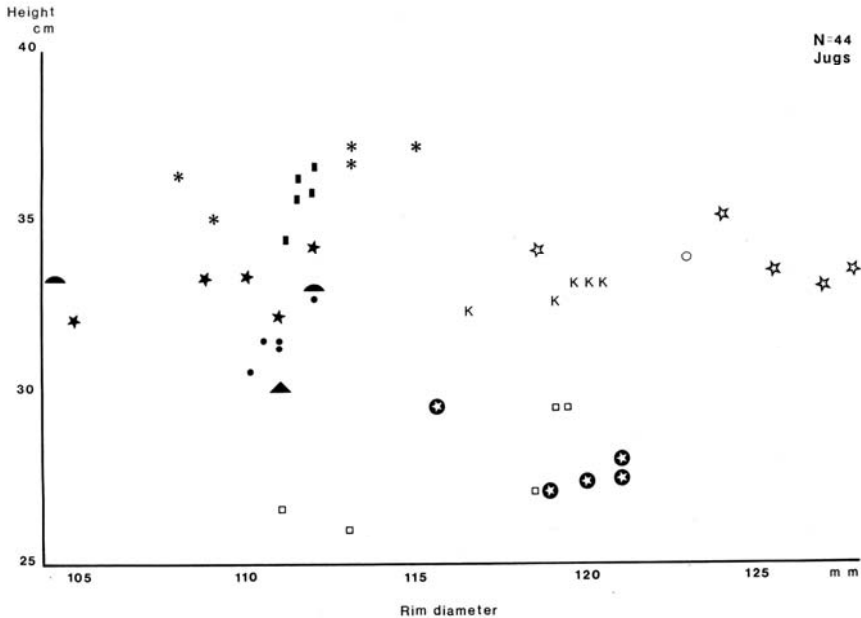


Fig. 8-2. Graph plots rim thickness and cooking pot circumference for 58 cooking pots made by 12 women in three Cypriot villages. These are features archaeologists normally can measure, even from sherds. The five darkened symbols represent two separate mountain villages, Kaminaria and Ayios Dimitrios. The seven open symbols and letters represent Kornos potters who, at the time, included five members of the Kornos Pottery Cooperative and two private potters (K and A). Cooking pots from mountain villages cluster in the lower left area of the graph whereas the same shapes from Kornos, clustered in the upper right, are slightly larger with thicker rims. There is some overlap where the two groups meet, which is corrected by including the order of decoration and handle attachment. One can separate lowland versus mountain village pots by this single detail of the manufacture. If the handle was applied after the incisions, it interferes with the decoration. In Kornos, handles are added in stage two, after the decoration, and consequently they erase part of the incisions. This is a characteristic of all pots represented by open symbols and letters.



**Fig. 8-3.** In Kornos, all potters finish stage one of manufacture by decorating the shoulder prior to handle application. The order of work in the two mountain communities is opposite, and only after handle attachment is the decoration carefully organized. Here, a Kornos potter rolls a coil in the air for a cooking pot during stage one of manufacture. After shaping the rim, the shoulder is smoothed and decorated. In stage two, the handles smudge part of the incised pattern on cooking pots and jugs (with pinched spouts) that dry in the foreground. At an even later stage, the strings supporting the thick lower body are removed and a rounded bottom is cut from the flat base. Photo by author.



**Fig. 8-4.** Plot shows vessel height and rim diameter for 44 jugs made by eleven potters. The darkened symbols on the left (below rim diameter of 115 mm) all belong to potters in the mountains while the open marks and letters represent Kornos potters. The mountain and lowland (Kornos Cooperative and private potters) traditions are easily distinguishable. Jugs made in Kornos have larger mouths and are slightly shorter than those made in the mountains. The order of handle application and decoration noted above applies for jugs and all types of pottery.

## Change and Continuity

Even as pottery functions as a boundary marker between contemporaneous communities, decoration incised on the vessel shoulders varies from village to village. As with vessel morphology, in 1986 there were minor instances of overlap in the combed decoration but for the most part, specific styles characterized each village. Modest yet clear differences within the combed patterns typified each of the three villages, including the two near each other in the Troodos Mountains. Most easily distinguished, based on the combing patterns, were pots by the last potter

to work in Kaminaria. From 1986 until 2000, she stippled the entire upper body and handles of cooking pots and jugs. She alone embellished cooking pot lids with decorative incisions and included her initial “A” on the pot shoulders, where it is clearly visible. She used more than one pattern, but her wares were invariably profusely decorated, in contrast with those of her contemporaries.

In 1986, individual incised wavy lines made with a pointed tool characterized Ayios Dimitrios, the other Troodos village where utilitarian pots constituted the repertoire. Quite distinct and separate were Kornos village incised patterns, which were normally limited to a narrow band encircling the upper shoulder. Rouletted, stamped rosette, stippled and combed designs were still in vogue in 1986 in lowland Kornos, but by the end of 1999, roulettes and rosettes disappeared as the most elderly potters stopped working. A comb was sometimes used to create stippled marks, or less often the comb was dragged along the surface.

A reexamination of traditional Cypriote pottery in 1999 revealed a traditional industry struggling to survive. The Kaminaria potter continued to incise her wares as before, with incisions and her initials virtually covering the upper body. She ceased her work following the death of her husband in June 2000. A single Ayios Dimitrios potter continued to work but had only two kiln firings in 1999, one in 2000, and none since. She devoted time to tending fields, selling fruit in Nicosia, and spending time with family and grandchildren, before her early death.

In Kornos, the four remaining members of the Pottery Cooperative all shared the identical incised pattern, consisting of two bands of horizontal combing with a wavy combed band between them. In addition, they sometimes resorted to their own signature decorations. One woman did not use double horizontal combing, but instead had a single horizontal band below the wavy combed line incised on the cooking pots (n=19) made from September 7–October 26, 1999. She used the same pattern on her jugs (n=13) in September. Another potter, who made cooking pots infrequently, used either one or two horizontals. She also experimented with a roulette pattern using a tool made by a brother visiting from the United Kingdom. The women maintained that without a husband or brother knowledgeable about crafting the rouletting tool (*trokoudi*), the design had almost disappeared. A third potter used either one or two horizontals, with a wavy band above or between them, for the fifty-nine pots recorded during October 8–November 23, 1999. Like the other women, the fourth Coop member used one or two horizontals, but occasionally added an extra wavy band above the uppermost horizontal.

The two remaining private potters, who work independently in the courtyard workspaces of their own homes, never used the decoration described above, preferring a single incised wavy line or one or two straight lines with incised dots above, below or between the straight or wavy horizontals. These two sisters, who work separately, use various combinations of incised dots similar to those they incise on the smaller decorative pieces. The sisters are the only Kornos potters who continue to shape decorative vases, in forms requiring considerable skill. In Fini village, adjacent to Ayios Dimitrios in the Troodos Mountains, where two sisters create primarily tourist artifacts, a single cooking pot observed in 2000 had no combing, but rather individually incised straight or wavy lines. There was no difficulty in distinguishing between the Fini pots and those of Kornos, given that the clay type and color are unique to each village.

### **Archaeological Implications**

One conclusion of the 1999–2000 follow-up study concerns the type of information that pots communicate over time and space concerning potters, male or female, and entire communities. While private potters in all three villages maintained use of the same incised patterns recorded in 1986, the Kornos Coop members did not. As a result, Kornos pottery no longer relayed the same information that it did in 1986, or if it does, it is subtler than ever. Despite the fact that there are fewer potters than in 1986, by the end of the millennium it became more difficult to designate the potter who made each cooking pot, given the sharing of a single decorative incised pattern. The final quantitative analysis remains to be completed, but it is apparent that potters no longer have a signature that is easily and consistently recognized. In Cyprus in 1986, the decoration and overall vessel proportions could facilitate the identification of a specific person in a specific village. By 2000, a glance at the decoration no longer conveyed the identification of the potter who made it. Measurements of overall vessel proportions might enable one to separate the work of each potter. One can still differentiate between cooking pots of the Kornos Pottery Cooperative workshop and those of the Kornos private potters, based on decoration alone. Handle types, overall vessel proportions and size also separate the work of the private potters from the women in the Cooperative. Whereas in the past, the voice of each Kornos Cooperative member was unequivocal, now the four potters seem to share a voice, perhaps in an effort to maximize a dying tradition.

It is also still possible to distinguish between the cooking pots of the private potters and those of the Kornos workshop members. Only while the pot remains in Kornos can an ever-dwindling number of potters and former potters match a potter with her pots. Already in 1986, once it left the village, the pot changed identity and was transformed into a product of Kornos village. If it left through a port (not likely for these heavy friable utilitarian pieces), it changed to represent the entire country of Cyprus or possibly even, simply a Mediterranean island.

The symbolic meaning of the pottery is further exemplified by the Kornos pottery engraved on Cypriot currency. In 2000, the ten-cent coin displayed a small decorated vase and the one-pound note showed a jug and an unfinished jar. As pots move further from their source of manufacture, the information they convey diminishes while their price increases. Outside Cyprus, a utilitarian cooking pot made in Kornos becomes an expression of a traditional handicraft item made by a nameless person in a nameless village. Although it relays less personal information the further it travels from its source, it conversely becomes a prestige item relaying information about wealth of its owner.

In some sense, the Bronze Age Cypriot White Slip (WS) and White Painted (WP) wares found in the Levant and Egypt convey information similar to that conveyed by the Kornos pottery abroad. Relatively coarsely painted pots from Cyprus become prized objects, the further they travel from their source. Simultaneously, they convey less information about the potter, but more about the owner. WP wares found in the Levant and Egypt belong to the southern Cypriot painted tradition. In the Levant, however, they are regarded simply as Cypriot. In Cyprus, the different patterns painted on WS and WP wares can inform about particular potters, workshops or styles, as well as about time periods. When found in the Levant or Egypt, these same pieces relay information about chronology and country of origin, rather than about person or precise place of manufacture. No longer representing a people, they denote place, social standing and wealth. The more carefully painted wares remain in Cyprus. Demand for quality diminishes with distance, or at least quality is beyond the control of the purchaser. A pot that once represented the work of a particular potter and perhaps a painter, as well, comes to personify a place, be it a village or country, or a national or ethnic group. When the imported artifact is found in an ancient tomb, perhaps in association with “prestige” items, it transforms once again. Rather than representing a person or a place, it becomes a thing. It is an important thing to which archaeologists attach great meaning, as it signifies the wealth and power of its owner. It also becomes the cornerstone of dating the entire funerary assemblage.



Initially, pots made by craft specialists can represent a person, village, or workshop tradition. The further they travel from their source, the more they lose this original meaning.

## Conclusion

Kiln sites and pottery production locations, two uncommon archaeological finds, are rarely considered as conventional household/courtyard fixtures. In contrast, ethnoarchaeological research records Filipina and Cypriot women potters as craft specialists who work inside and in front of their homes. Women in traditional societies worldwide, of necessity, work close to or inside their homes where child rearing, care giving and seasonal activities occupy much of their time. Pottery manufacture, a seasonal occupation limited to the driest times of the year, can be considered one of the many seasonal chores carried out by women. As they manage the household, children and the elderly, as they cook, clean, visit neighbors, and feed animals year-round, seasonal jobs are equally varied. After planting, weeding, watering, harvesting large or small plots of land, women process, cook, prepare and preserve foodstuffs for domestic use, extended families, neighbors, and for sale or barter. Women conserve and sell foods they grow. Inevitably, they lack certain foods due to the geographical constraints of water, sun and soil. Women obtain foodstuffs from other regions by means of an exchange mechanism.

Pottery manufacture, a seasonal task, overlaps with the space needed for other seasonal and year round activities. The interior rooms and exterior areas function as processing, storage, and living spaces for people and animals throughout the year. Summertime visits to potters find courtyards, porches, and houses full of pottery in different stages of manufacture, along with stone anvils, reused scraps of metal, organic tools and equipment. Off-season, winter visits cause most observers to conclude that no pottery was or would ever be made in those same spaces. The complete absence of pottery, clay, or tools is due to the multi-functional use of space, depending on the season. Despite the domestic setting, pottery and other products made at home can represent critical craft industries, even in the modern world.

In traditional and ancient societies, pottery found close to its source informs about the maker. Ceramic ethnoarchaeological studies of craft specialists in Cyprus and the Philippines, who barter or sell their wares locally and not to tourists, show that these individuals create pottery that they can identify as the work of specific potters, most of whom are women. Pots can be acquired in a number of ways. They break easily and

as they are replaced, slow changes in morphology occur. Changes in rim form, stance and thickness have been the crux of ceramic typologies for over a century. Ceramic technology is a skill learned through observation and practice, oftentimes passed from mother to daughter. It embodies a wealth of knowledge about a tradition maintained for generations. Fundamental forming techniques are slow to alter, but vessel surfaces are available for individual expression and observation. As a ceramic container moves further from its source, it loses the signature of its maker and takes on the identity of a village or geographic area. Still, the original voice remains and can be comprehended and translated by archaeologists who recognize the silent movements preserved in clay.