The implementation of wheel-thrown ceramic technology in the Aegean during the 3rd millennium BCE overtook production of hand-made pottery as a result of specific imperative and necessitating conditions within the society. In this paper I will examine what these conditions were.

Wheel-thrown pottery developed within an increasingly complex society, ruled by elites who oversaw political, administrative, and religious functions within the urban center. In turn, the urban center experienced a surplus in of agricultural goods and natural resources which it used to participate in a complex trade network among other urban centers where agricultural surpluses, natural resources, and finished craft products were exchanged. It is within this context of a large centralized population, supported by surplus agricultural produce and a healthy system of trade with foreign markets that craft specialization arose.

Formerly, in a subsistence farming economy, each family made its own goods and there was no economic specialization. But once wheel-worked pottery began to become popular, there is evidence for economic specialization, especially in fine craft production. Modern ethnographic studies suggest that becoming a competent potter using the wheel requires several years of training and apprenticeship beginning in childhood (Roux and Corbetta 1989). It is only later that a potter using the wheel can begin to benefit financially (Roux and Corbetta 1989). Society must have the ability to support this long training in return for increased efficiency yielding more pottery, finer goods, and valuable trade items. Economic and craft specialization is therefore the necessitating factor that caused wheel-thrown pottery to overtake hand-made pottery.

While the initial concept of the potters' wheel is likely an import from the Near East, investigators have traced a local progression from stationary to easily rotating wheels in places such as Crete over long periods of time where adaptation of the wheel was being stimulated by local influences (Evely 1988). Therefore the wheel was a foreign concept adapted over time by local populations. The wheel design advanced through time to allow the potter more control over the operation of the wheel in constructing symmetrical and valuable pottery.

In this context, we may ask why wheel-made pottery supplanted hand-built pottery so completely. Because wheel-thrown pottery can be mass-produced quickly and cheaply by a specialist, this technology replaced the more labor-intensive and time-consuming task of crafting hand-built pottery. Increased speed and efficiency was tempered only by the demanding apprenticeship period required for new potters to master the skills. Throwing a pot on a wheel, as opposed to molding it by hand, requires greater dexterity and sufficient size and body strength as measured by Roux (1989). "In an archaeological or an ethnographic situation," Roux says, "the significant technological element is not the tool, but the technique of throwing" (1989: 97).

Knappett has noted an intricate economic link between the level of craft specialization and control by the elites, on the one hand, and the appearance of wheel-made pottery on the other (1999). The wheel became an economic tool controlled and exploited by rulers. Once specialists arose, the potters' workshops and the potters themselves were brought into the court area of the

urban center for supervision by the elites, who could make a profit off the trade of finely crafted and decorated vessels. Knowledge about the adoption and spread of wheel technology must accordingly be fitted into a context of social and economic relations. This context provides insight into how technology and economic craft specialization was adopted and eventually adapted and controlled to suit the ruling class. Wheel-throwing technology came into use and spread in a complex society and hierarchical society where the rulers used this technology to further elevate their position through profiting off the craft work of the potters.

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