

INTRODUCTORY REMARKS

William D. Kingery
(University of Arizona)

Ceramic materials are one of our oldest manufactures. They're important in studies of prehistory and also have been a wonderful medium for art. As we all know, high technology ceramic materials are on the cutting edge of modern science and engineering. They also provide an inexpensive and widely available materials source for many ordinary applications.

Most of the discussions of members of this Academy have been at technical meetings concerning processes, structures and properties. These attributes and behaviors of ceramics are particularly suitable for scientific study. However, it is important to remember that both the processing and the production of these objects as well as their uses, functions and performance are social activities in which a central role is played by social organization, cultural perceptions and human behavior.

I think the starting point of considering "Ceramics and Society" must be with the uses, functions and performance of our creations. In prehistory, the very first ceramics seemed to have purely symbolic functions. Later, utilitarian vessels almost immediately came to be decorated to serve social functions as well as utilitarian purposes. By 7,500 years ago, polychrome ceramics were widespread. Some 8,000 years ago, ceramic jewelry was fashioned. One part of our industry is still associated with jewelry and with technical single crystal manufacture.

It is particularly appropriate to have this initial meeting of our Academy in Italy. Of western ceramics, the most important

high-value-added new ceramic efforts were Italian. First, there was the development of Renaissance istoriato maiolica. Narrative painting on maiolica transformed the social organization of pottery manufacture. Then, there was Francisco de Medici's porcelain, which was a technical success but a commercial impossibility. The Grand Duke of Tuscany was an amateur scientist. Both occurred in a new Renaissance culture involving consumerism and developing capitalism. For the first time *things* became important to a wide audience. A century later, the marriage of science and art was consummated in the development of Böttger's hard porcelain. The true onset of capitalism and consumerism came with the European adoption of the Chinese factory system of manufacture in the 18th century which is associated with the name of Josiah Wedgwood. At every stage, we see our industry and our profession as a social activity interacting with science, social organization, economic structures and cultural beliefs. This close interaction of ceramic technology, social organizations and cultural imperatives continued through the electrical revolution, the computer revolution and modern high technology ceramics. We have much evidence of the complexities of social and technical interactions on our profession and industry.

We already have many, perhaps too many, technical meetings which focus on the inanimate attributes of ceramics and other technologies. If this Academy is to take a place of leadership in the ceramics community, and on a broader scale in the communities of science, engineering and technology, it is quite appropriate for it to focus on relationships of our technology in its social and cultural context.