graphic analyses are integrated to reach a preliminary, yet insightful conclusion. As it becomes clear why certain clay types were used for different functions during the Early Iron Age, it is also evident that the clays used for tuyeres demand the strictest requirements. They must be highly refractory. The tuyere clays could have functioned for pottery making (due to their plastic quality), but were almost never used in this way. This suggests that limited access to the most refractory clays in an area would have benefited iron smelters by minimizing its overexploitation by other craftsmen. Even when highly refractory clays were not available, such as at the BU and KAB sites, the clays used for tuyeres and pottery were clearly different. Thus, there was a careful partitioning of resource use that may have reflected economic or socio-political adaptations and controls in the society.

At one of the six sites investigated, different groups of iron smelters may have had differential access to the best tuyere-making clays. Despite the use of superior tuyere clay at the nearby KM2 and KM3 sites, it seems that the iron smelters at KM resorted to using a pottery clay that melted at lower temperatures. Experimental iron smelting in the Kagera region suggests that the quality of the tuyere clay directly affects the productivity of a smelt. The iron smelters with access to the best clays could produce more iron and therefore gain economically. Such economic prosperity could result in socio-political rank differentiation that should be reflected in the archaeological record in other ways. This will be tested further as new excavations occur.

The success of a ceramic research project that utilizes petrographic techniques lies in integrating many methodological considerations. The excavation of suitable clay objects from clear, datable contexts, careful sampling of those ceramics, systematic petrographic study (sometimes along with chemical or other physical analyses) of the samples, and the collection and petrographic analysis of local clays are all important components of a careful project. Petrography is not a methodology that can be learned quickly by archaeologists since what must be learned is both the methods developed for geology and also how to interpret the effects of human alteration on geological materials (for instance, the thin section in Figure 4b is highly complex). The rewards are many, however, when the time is taken to master the techniques.

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