Is It Hot Enough Yet? Reconstructing Firing Temperatures for Prehistoric Honduran Ceramics Through Re-Firing Experiments

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Canoas sherds were refired at 500° C or higher. Only one sherd was found to be fired below 400° C. From both sites proved to be relatively low. Overall, the original firing structures were built and utilized in the Naco Valley, their usage spreading as the power of elites decentralized. We hypothesized that these firing structures were built in order to obtain high firing temperatures to produce high-quality pottery as well as to increase scales and volumes of production.

**Methods**

The controlled-refiring of pottery on an electric kiln establishes the appropriate original firing temperature. The project was executed on the premise that during prehistoric times, potters would have monitored the fire temperature using a combination of visual cues such as the behavior of the flames and the color of the pottery. In this experiment, the firing temperature was controlled using a color chart indicating firing temperatures. An electric kiln was used to refire sherds, which were placed inside the kiln, and the temperature was monitored and recorded throughout the experiment.

**Results**

The refiring experiments of the 256 sherds yielded surprising data. Despite the absence of firing structures at La Sierra and Las Canas, refiring temperatures of sherds from both sites proved to be relatively low. Overall, the median temperature of Las Canas sherds varied between 500° and 600° C, while the median temperature at La Sierra was 500° C. This suggests that the refiring temperatures were lower, which could indicate that the original firing temperatures were also lower. The differences in refiring temperatures could be due to various factors such as the type of kiln, clay composition, or the monitoring techniques used.

**Discussion**

Overall, the data are not highly suitable. The color changes observed in the sherds suggest that the vast majority of pottery from Las Canas and La Sierra was fired at temperatures between 300° and 500° C. Surveys of firing structures in the Naco and middle valleys suggest that the firing temperatures were much lower, indicating that the potters’ goal does not seem to have been to achieve especially high firing temperatures. The existence of this experiment, therefore, suggests that the differences in refiring temperatures could be due to varying firing practices or the use of different kilns.

The refiring process is an important method for understanding the firing practices of prehistoric potters. It allows us to infer the original firing temperatures and the firing techniques used, which can provide insights into the technological and cultural practices of these communities. The results of this experiment contribute to our understanding of the firing processes used in the Naco Valley and the surrounding areas, providing valuable information about the production and consumption of pottery in prehistoric times.

**Conclusion**

This experiment demonstrated the potential of refiring sherds in controlled environments, providing insights into the firing practices of prehistoric potters. The results suggest that the refiring temperatures were lower than expected, indicating that the potters’ goal was not to achieve high firing temperatures. Further research is needed to explore the factors influencing these firing temperatures and to understand the implications for the production and consumption of pottery in the Naco Valley and its surrounding areas.