IU SOUTH BEND FACULTY RESEARCH GRANT
FINAL REPORT

“A Quantitative Analysis of Pre-Columbian Ceramic Vessel Design and Decoration”

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As mentioned in my grant application, I had previously photographed more than 200 pre-Columbian domestic ceramic vessels held at a number of museums and made the necessary measurements to statistically describe each item. For appropriate specimens, I measured the thickness of the vessel walls at several specific points on the body and recorded the height of the vessel as well as the rim diameter. Specific ratios taken from the examination of ceramic vessels have been demonstrated to be useful in determining group identity in other cultures (Bentley et al., 2009; Lycett, 2015; McCormick, 2007; Pauketet et al., 1998; Skibo, 1992). While I had collected measurements and made photographs of a large number of artifacts, I had not had the time to conduct any statistical analysis of the data.

This summer, with the time afforded by the grant, I was able to complete coding of the data I have recorded. I then was able to analyze both the visual and morphological information to identify possible patterns. Correlations between the artifact data sets and the Rouse model were examined using techniques such as Mantel tests and Principal Coordinate analysis. Although the statistical assessment is fairly straightforward, I found that the various vessel designs and decorations are not as clearly distinguishable as is recorded in the literature. Archaeologists often straddle the objective and subjective worlds of analysis. It took significant time to discern the relationships and develop my model of potter agency and cultural influence.

I was aided in my research by Valeria Chamarro, an undergraduate Anthropology major. She was trained in the coding and statistical analysis, and she was paid for the hours she spent crunching the numbers. She will also receive experience in presenting research at conferences and will be listed as co-author on the work we have done. Valeria and I have drafted a paper from our research, and we intend to deliver it (and posters) at national and international research conferences. She is looking at presenting at the IU South Bend Undergraduate Research Conference. I have already received funding to attend the International Association of Caribbean Archaeologists congress in July 2017. We will then expand and revise the presentations for submissions to the Journal of Caribbean Archaeology, Latin American Archaeology, the Journal of Archaeological Science, or the like. In addition, I will publish my data and the results on IU Scholar Works and other open-access outlets to disseminate widely. I have already talked with editors of those journals, and colleagues at recent meetings. There is encouraging excitement about my research, as it has been noticed but not quantified, at other excavation sites in the Greater Antilles.