Defining petrographic groups among regional wares at La Quemada, Zacatecas, Mexico

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Were La Quemada decorated types local variants of regional styles or imports from adjacent river valleys?

Situated in the Malpaso Valley of Zacatecas, Mexico, La Quemada was one of a series of polities that developed in the northern frontier of Mesoamerica during the Epiclassic period (A.D. 600-900; Figure 1). Widely distributed ceramic wares (Figure 2) suggest interaction among northern frontier polities, but it remains unknown whether their distribution is the product of regional ceramic traditions (i.e., shared style) or direct, face-to-face interaction among individuals (i.e., shared composition). Previous characterization studies of La Quemada ceramics have found compositional variability (Strazicich 1995; Wells 2000) and shared fabrics with other frontier polities (Torvinen 2016). This poster builds upon these studies to define a set of petrographic groups in the La Quemada assemblage and to address two specific research questions:

- **Do types have consistent paste recipes (i.e., all sherds assigned to the same group) or do they crosscut petrographic groups (i.e., sherds assigned to more than one group)?**
- **Do types associated with regional ceramic traditions have more varied paste recipes than other decorated types?**

Sample Selection and Qualitative Sort

This petrographic analysis involves the characterization of all 10 ceramic wares identified in the LQ-MVP assemblage (Schiaiviti et al. 1996). Fifteen sherds were selected for each ware and, if present, any types within that ware, resulting in a total of 297 sherds. Each thin section was examined and separated into groups based primarily on inclusions. The groups underwent a series of re-evaluations as sherds shuffled between groups and qualitative data were recorded. At this stage in the analysis, a set of five petrographic groups has been identified (Figure 3). The results of the qualitative sort are provided in Table 1. Some of the important observations to note are:

- **Tuff Group** comprises 48% of sample and is found in all types but Brushed. Types associated with regional ceramic styles tend to crosscut groups and some rarer types have very consistent paste recipes (i.e., low diversity)
- 70% of incised-engraved sherds assigned to Altered Sand I Group
- Majority of Romos Red-on-buff sherds assigned to Altered Sand II Group
- Majority of Pseudo-cloisonné sherds assigned to Monomineralic Group
- Igneous Rock Group is very rare and represents possible nonlocal imports

Conclusions and Future Research

- **Similar to previous research conducted by Strazicich (1995), preliminary results suggest the majority of La Quemada pottery was produced within the same community of practice, represented by the Tuff Group.**
- **Types associated with regional traditions may have also been produced by specialists using different paste recipes (i.e., Altered Sand and Monomineralic Groups).**
- **Subsample of petrographic groups will be subjected to point-counting (modal analysis) and SEM-WDS analysis of clay fraction to define fabric classes and establish their local or nonlocal provenance.**
- **Ultimately, fabric classes will be used as proxy data for relational networks in model of collective social identification within La Quemada.**

Table 1. Ceramic types organized by petrographic groups. **Bolded** type names are those associated with regional styles (see Figure 2). The diversity index (inverse of Simpson’s D) identifies types with more diverse paste recipes (i.e., those that crosscut petrographic groups).

<table>
<thead>
<tr>
<th>Petrographic Group</th>
<th>Monomineralic</th>
<th>Brushed (B)</th>
<th>Santa Rosa R/W</th>
<th>Ponce Resist</th>
<th>Incised-engraved</th>
<th>Tuff</th>
<th>Altered Sand I</th>
<th>Altered Sand II</th>
<th>Total Sampled</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tuff</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>10</td>
<td>15</td>
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<tr>
<td><strong>Altered Sand I</strong></td>
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<td></td>
<td></td>
<td></td>
<td>14</td>
<td>3</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Altered Sand II</strong></td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Igneous Rock</strong></td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td>15</td>
<td>15</td>
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<tr>
<td><strong>Total Sampled</strong></td>
<td>15</td>
<td>10</td>
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Acknowledgements

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