Interaction between Puebloan Villages from the West-Central to the Rio Grande Regions of New Mexico

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INTRODUCTION

Distinctive glazed pottery was produced primarily during the Pueblo IV period (A.D. 1275-1600) by the Pueblo people of the American Southwest. Stylistic analysis has characterized several types of pottery as Western-Style including St. Johns, Heshotauthla and Kwakina polychromes which are most often associated with the Zuni and Acoma areas of West Central New Mexico. Surprisingly, in the current study, Western-style glaze polychromes accounted for about 20% of the decorated assemblage recovered from the Tijeras Pueblo site in the Central Rio Grande (CRG) region. Tijeras is separated from the Zuni site by some 170 miles and by about 80 miles from the Acoma site. The presence of these Western-style wares at Tijeras leads to questions regarding the interaction of ancient peoples from these villages. Are these ceramics imported from the western regions or are they local copies produced in the CRG?

DESCRIPTION OF THE ACTUAL WORK

Petrographic and Refiring Analysis

Preliminary work indicated that most Western-style glazes recovered from the Tijeras site refired either Reddish Yellow (RY) or Very Pale Brown-Pink (VPB). The RY pastes are generally tempered with sherd, sherd and schist or sherd with varying mixes of schist and basalt (lithic sand) all of which are common petrography in the central Rio Grande region (Tijeras). VPB pastes, on the other hand, are more often tempered with sherd or sherd-tempered sherd. These light-firing pastes are not characteristic of glaze-painted pottery made in the CRG, but are commonly associated with glaze wares from the Acoma region to the west.

Instrumental Neutron Activation Analysis (NAA)

219 Tijeras sherds including 30 Tijeras Utility wares and a mix of 189 Rio Grande and Western-style glaze-painted red wares and polychromes were analyzed by neutron activation analysis using the Texas A&M University's Nuclear Science Center (NSC) research reactor. Established NAA procedures and methods were used[1] to measure some 31 elements and a standard suite of multivariate techniques were performed using the XLSTAT statistical package. Initial k-means clustering were refined by discriminate function analysis resulting in four compositional groups. Group assignment criteria required 95% confidence of membership and less than 1% chance of membership in any other group.

RESULTS

Group 1 consisted of 63 members, dominated by red ware and polychrome sherds that refired to VPB pastes that followed the traditions of the Western-style. This group is suspected as representing imported Western wares.

The 76 sherds assigned to Group 2 included all those clearly identifiable stylistically as CRG (e.g. Agua Fria Glaze-Painted wares), but also a mix of Western types. This group was tempered primarily with lithic sand or lithic sand and sherd and refires RY. Therefore this group is suspected as being local to the Albuquerque area (CRG).

Group 3, containing 33 members, is dominated by red ware and polychrome sherds with sherd or sherd and schist tempers and refires to RY, although slightly "redder" than Group 2. Stylistically these sherds are primarily Western-style polychromes.

The final Group 4 consists entirely of the 30 Tijeras Utility ware sherds made from distinctive coarse micaceous residual clay that refires red. 17 sherds were left unassigned based on the criteria described.

Figure 1 presents the bilateral plot of discriminate function scores for the data and clearly shows separation of the Utility ware (Group 4) from all other sherds, Group 2 is also clearly differentiated. Group 2 represents locally produced, CRG style pottery but also includes members thought likely to be local productions of Western-style designs. This assessment is in line with refiring analysis showing RY pastes for this group. Groups 1 and 3 demonstrate significant overlap on the plot which provides some evidence that the Western-style glazeware from group 3 with RY pastes may be products of imported wares along with those with light firing pastes more commonly associated with the western regions.

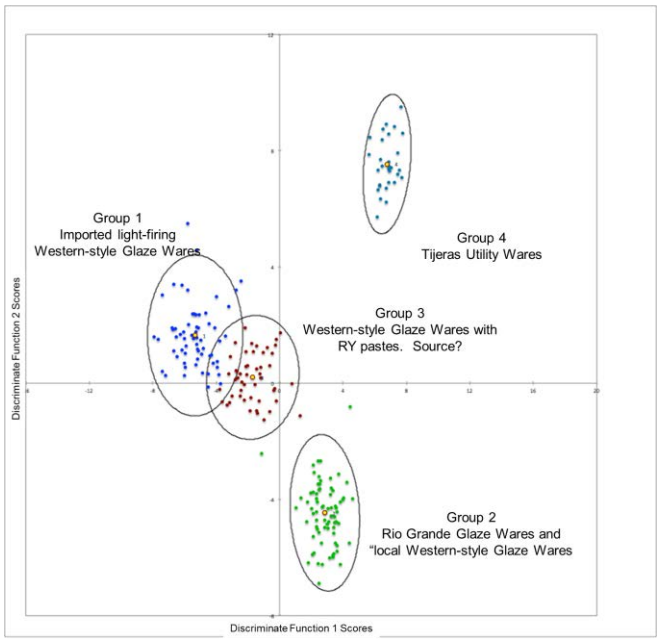

Fig. 1. Plot of Discriminate Function Analysis scores showing four Tijeras pottery clusters.

Comparison with Previous NAA Data from the Zuni Region

Data from this study was compared with that derived from the NAA analyses of some 215 glaze-painted red ware and polychrome sherds from the Zuni region. Comparison was possible as the analytical protocols for our work are very similar to those used at the University of Missouri (MURR) where the previous analyses were performed and detailed quality control comparisons were made. The Tijeras Utility wares were not included in the comparison which is shown in Figure 2. Once again, the light firing sherds from Tijeras Group 2 which contained the CRG styles as well as "local" Western-style glaze wares shows clear separation from the other groups. The two Zuni groups, those identified as El Morro and Dakota Sandstone core clusters are not clearly separated from the Tijeras groups 1 or 3, although these Tijeras group members cannot statistically be assigned to the Zuni groups. This may indicate that while these sherds are likely imported to the CRG region, they may have originated other than at the Zuni site, perhaps at the Acoma site. We do not have comparison data for Acoma sherds at this time.

CONCLUSIONS

Petrographic and NAA analysis clearly confirm that some and possibly most of the Western-style glaze-painted pottery recovered from Tijeras Pueblo was made locally in the Albuquerque area of the Central Rio Grande. Western-style glaze wares with distinct light-firing pastes were probably imported from the western regions, possibly from the Eastern Zuni or Acoma regions. The source of the redder paste Western-style glaze wares, tempered with sherd or sherd and schist and assigned to Tijeras Group 3, is much more ambiguous. Tempers and pastes are consistent with Rio Grande style glaze wares but overlapping chemical signatures may indicate a Western origin for at least part of this group. An intermediate source area is a possibility, but would require additional data for confirmation. Contrary to our initial expectations, little or no Western-style glaze-painted pottery from Tijeras appears to be coming from the core area of the Zuni Region.

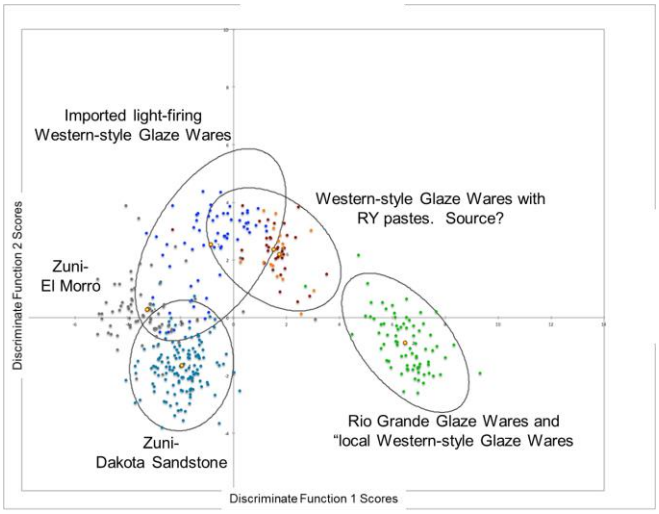

Fig. 2. Discriminate Function plot showing comparison of Tijeras groups to the two core Zuni Region clusters.

REFERENCES

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