

Where were their pots made?



Western-style glaze-painted bowl (Heshotauthla Glaze Polychrome) recovered from Tijeras Pueblo (LA581) (78.67.47). Courtesy of Maxwell Museum of Anthropology, University of New Mexico.

Not all of the pottery fragments found at Ancestral Pueblo sites were made in the local community. Pueblo villagers, including those who lived at Tijeras Pueblo, maintained connections to people living across the Southwest and beyond—as far west as southern California and as far east as the Great Plains. Ties between communities were based on kinship and rituals as well as trade.

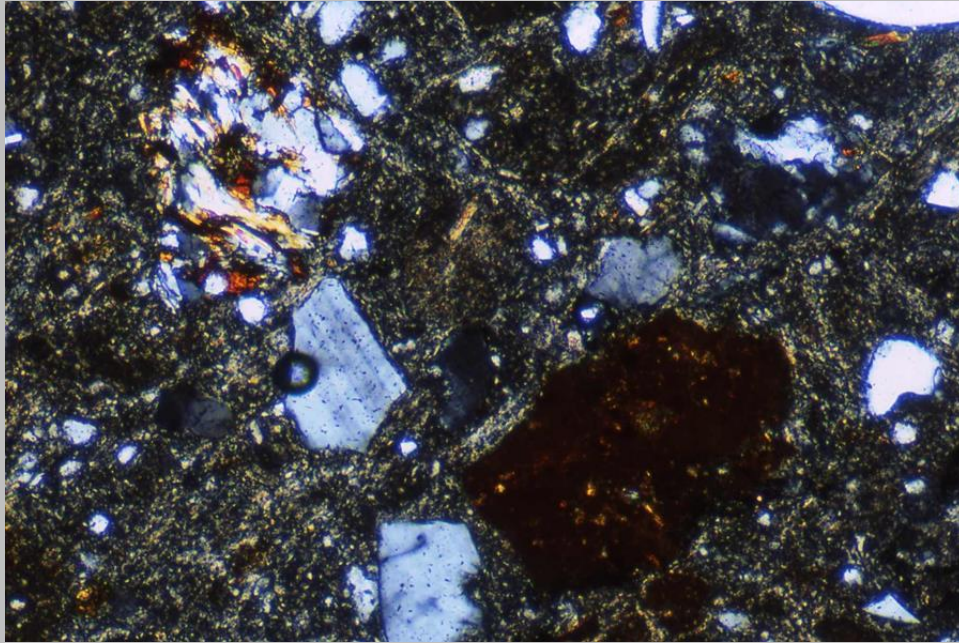
The early 1300s were a time of population movement and social upheaval, as many people left the northern and western Southwest and formed new, larger towns, including Tijeras Pueblo, in and near the Rio Grande Valley. These new communities were made up of a mix of local people as well as immigrants. The migrants continued to have connections with the communities from which they came. By studying the potsherds from Tijeras Pueblo, archaeologists have learned where non-local pottery was made, and thus traced some of the inter-community connections and possible sources of migration.

One kind of pottery found at Tijeras Pueblo is particularly useful for tracing these connections: glaze-painted pottery. This unique pottery tradition began in the late 1200s—first along the Mogollon Rim and in the Upper Little Colorado and Zuni regions, then spreading eastward to the Rio Grande. It involved potters experimenting with adding copper and lead-based minerals to pigments, which vitrified upon firing to produce a glossy glaze paint. They applied this new paint to the surfaces of red pots. The new style of pottery was a conscious break with existing Pueblo ceramic traditions and probably was associated with the spread of new religious ideas and practices. Glaze-paint technology is fairly complex, so the knowledge of how to produce these pigments had to be transmitted directly from one potter to another. Thus, by tracing the spread of glaze-paint technology we are also tracing the movement of people with detailed technological and social knowledge across the late precontact Southwest.

Tijeras Pueblo has yielded the earliest known tree ring date (AD 1313) directly associated with the local glaze-painted pottery type, Agua Fria Glaze-on-red. This type represents the beginning of the glaze ware tradition among the Eastern Pueblos of the central Rio Grande. In addition, Tijeras Pueblo had unusually large amounts of Western Pueblo-style glaze-painted pottery in deposits from the initial settlement of the town (in the early 1300s). These Western Pueblo types, including Heshotauthla Glaze Polychrome, are commonly found at villages far west of the Rio Grande Valley, dating to the late 1200s and early 1300s. The abundance of this exotic pottery at Tijeras Pueblo raises interesting questions: Are the Western Pueblo style glaze wares at Tijeras Pueblo imports from the west, or local copies? And what does the presence of these Western Pueblo style glazes tell us about migration, the formation of new communities, and inter-community interaction at Tijeras Pueblo during 1300s?

Archaeologists use a variety of different techniques to learn where pottery was made. Recent studies of the glaze-painted pottery from Tijeras Pueblo combined two different techniques, petrographic analysis and instrumental neutron activation analysis (NAA), to determine the origins of its decorated pots. Petrographic analysis involves fixing a very thin slice of pottery to a glass slide and identifying the tiny pieces of rocks and minerals in the fired clay, using a polarizing microscope. The kinds of rocks present in the pottery can then be linked to their probable geological sources. NAA involves using a research reactor to bombard an archaeological sample with neutrons, to release radioactive particles with distinctive chemical signatures. NAA can

measure the presence and abundance of dozens of elements in the sample. Pots made at a specific village, from the same raw materials, have very similar elements, creating a unique chemical “signature” for pots from the same source. Using statistical tests, the chemical signature of pottery of unknown origin can be matched to signatures from known sources of production.



Petrographic thin section of locally made glaze-painted pottery. This pottery was made from sedimentary clays that naturally contain a variety of different rock fragments, including schist, as seen in the upper left of the photo. Potters in the Albuquerque area also often added crushed pot sherds, as seen in the lower right part of the photo. The photo was taken through a microscope with two polarizing filters affixed at right angles (crossed-polars) at 200x magnification. Courtesy of Judith Habicht-Mauche.

Ceramic petrography works well as a pottery sourcing technique in the Rio Grande Valley, where Ancestral Pueblo potters used a variety of distinctive rocks and sands to “temper” (amend) clay properties. It is less useful in the Western Pueblo area, where potters used ground-up potsherds to temper their clays. This is why archaeologists who work in the Western Pueblo area prefer to use NAA to source pottery. At Tijeras Pueblo, archaeologists needed both techniques, so we could study potential sources of pottery made locally and also pots imported from villages to the west.

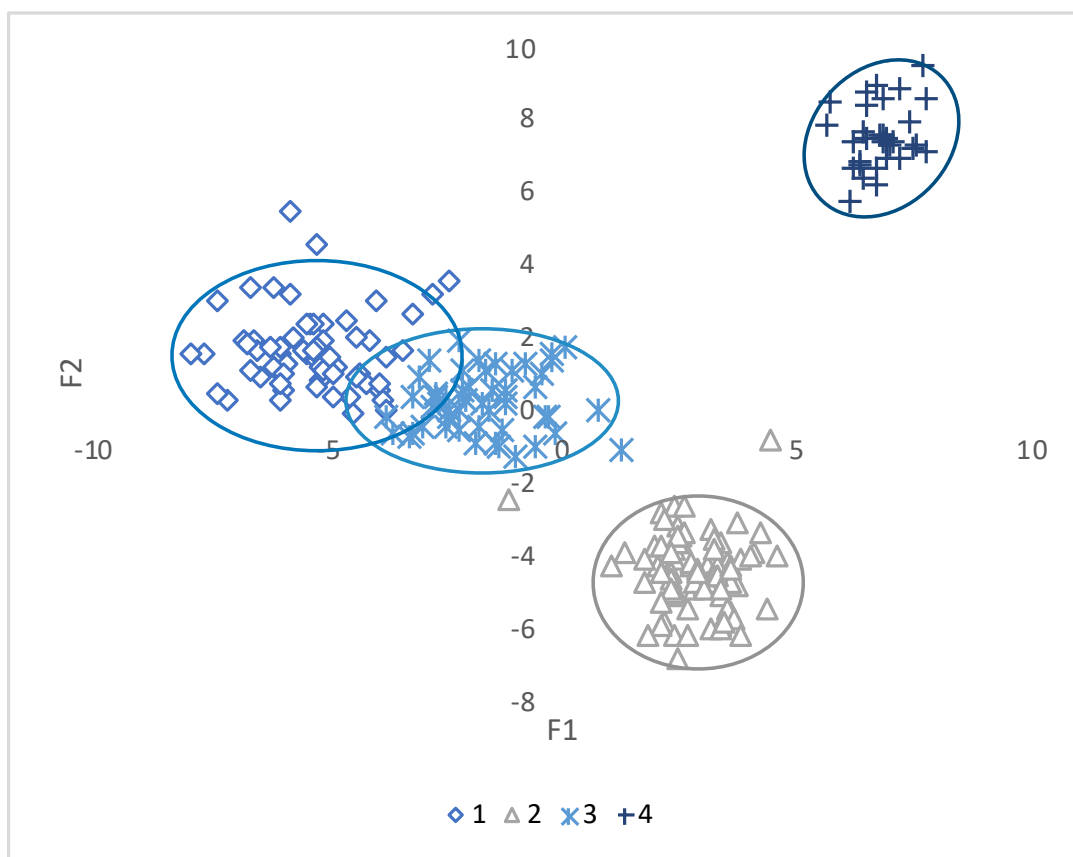
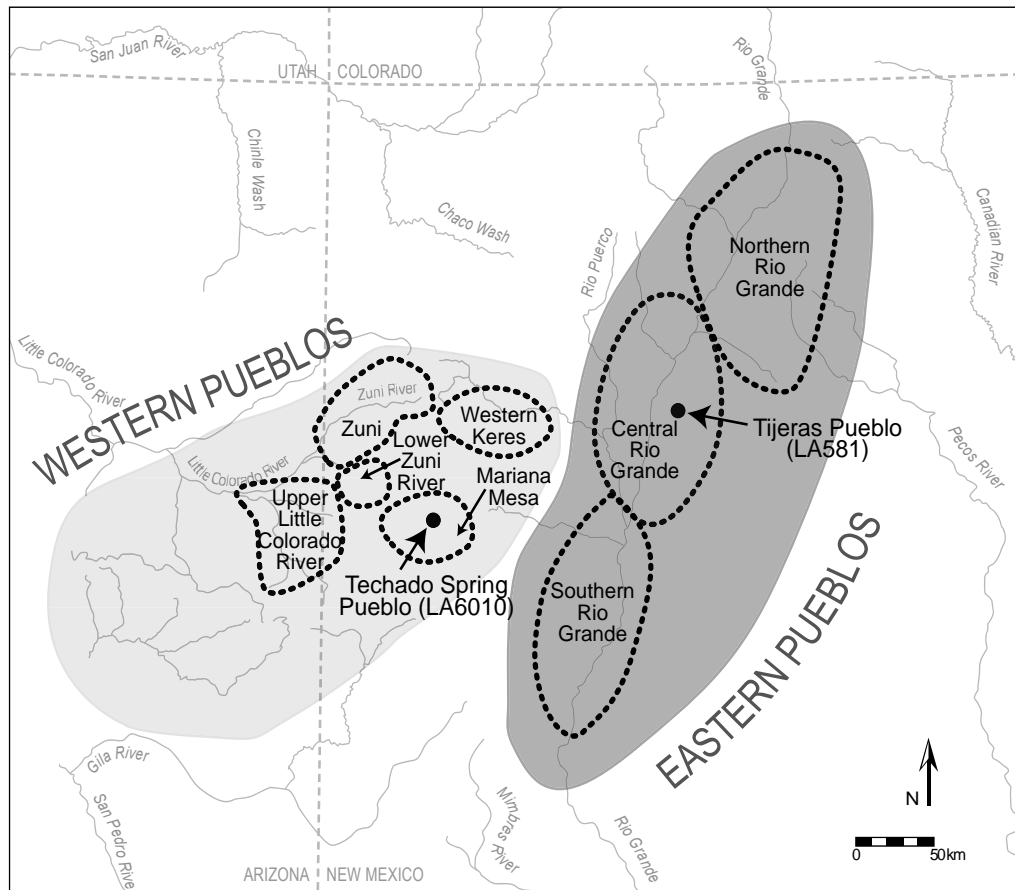


Chart showing statistically defined groups of pottery samples from Tijeras Pueblo based on similarities in their chemical composition as determined by NAA. Group 4 contains utility ware pottery made locally. Group 2 contains a mix of Rio Grande and Western-style glaze-painted pottery made locally. Groups 1 and 3 contain Western glaze-painted pottery that was most likely imported from Pueblo communities in east central Arizona and west central New Mexico. Courtesy of Judith Habicht-Mauche and Suzanne Eckert.

Thanks to these studies, we know that the early Western-style glaze ware pots at Tijeras Pueblo included a mix of imported pottery and locally made copies. Most of the imported glaze-painted pots came from communities in west central New Mexico and east central Arizona—places that experienced considerable social upheaval and emigration about the same time that people were establishing new towns and villages, including Tijeras Pueblo, along the Rio Grande.



Probable sources of early Western-style glaze-painted pottery found at Tijeras Pueblo, based on petrographic observations and Neutron Activation Analysis.

The Pueblo of Isleta recognizes Tijeras Pueblo as an ancestral community within the traditional Southern Tiwa World. Archaeological evidence does suggest that most of the people who settled at Tijeras Pueblo around 1300 had been living in the Tijeras Canyon area for several hundred years. However, they may have been joined by people from the Albuquerque area as well as by long-distance migrants from west-central New Mexico and east-central Arizona. Those Western Pueblo immigrants probably made the local copies of Western-style glaze-painted pots, having brought their pottery-making knowledge, as well as new religious ideas and practices, with them. This introduced suite of knowledge, technologies, and practices was transformed in less than a generation, as local potters creatively reinterpreted

the new ideas, technologies, and practices to meet their own tastes and the new social and ideological setting.

To dig deeper, see:

Habicht-Mauche, Judith A. 2022. Linda Cordell and the Tijeras Pueblo Ceramics Project. In *Linda S. Cordell: Innovating Southwest Archaeology*, pp. 47–54. Edited by Maxine E. McBrinn and Deborah L. Huntley. Museum of New Mexico Press, Santa Fe.

Habicht-Mauche, Judith A. and Suzanne L. Eckert. 2021. Coalescence and the Spread of Glaze-Painted Pottery in the Central Rio Grande: The View from Tijeras Pueblo (LA 581), New Mexico. *American Antiquity* 86(4): 742–772.