

SPARC Project Short Report

Project Name:

Evaluating Competition Between Chaco-Style Great Houses in the Southern Cibola Region of West-Central New Mexico

PI(s) and Institution(s):

Kristin N. Safi, Andrew I. Duff
Washington State University

I. Summary of work undertaken in collaboration with SPARC

Research on the Pueblo II period is often centered on the massive buildings called “great houses” within Chaco Canyon and smaller versions scattered across the American Southwest. Their architectural similarity and distribution have been interpreted as reflecting a regional system. Although scholars disagree on what social, economic, or ritual factors formed the basis of such a system, many use architectural form to investigate how great houses articulated regionally. Identifying “Chacoan” architectural features has become an important component of great house research. Our goal was to map the Largo Gap great house in order to evaluate the degree to which it was architecturally and socially linked to Chaco Canyon populations. Largo Gap is one of seven Pueblo II great houses located on the southern margin of the Chaco system. Both Mogollon and Pueblo ceramics are present at sites in the area, including at the great house. If great houses were regionally linked and held the same role, those within this area may have served a multi-ethnic constituency. Accurately mapping Largo Gap’s architecture not only provides a means to explore whether great houses in this area reflect ties to a regional conceptualization of monumental architecture, but also if great house form was more varied depending on local social contexts. Generally, the amount of great house architectural rubble and the visibility of their built landscapes, including great kivas, berms, and Chaco roads, allow them to be mapped relatively easily from surface remains. However, many factors have reduced the surface visibility of Largo Gap’s size, architectural layout, and associated features. First, the great house was constructed along a steep, small knoll, and as such, much of its associated rubble has fallen down slope, obscuring many of the structure’s visible surface alignments. Consequently, the great house appears to be much smaller than many contemporaneous great houses, which has suggested Largo Gap is a poor emulation of Chaco-style architecture. Second, Largo Gap’s architectural remains have been subjected to significant historic stone robbing and modern cattle trampling, which, too, have disturbed the surface visibility of the structure’s size and layout.

To counteract these constraints, aerial thermography and ground penetrating radar were used to characterize the structure’s shape and extent and to identify features that lack surface expression. The research questions addressed by these techniques include: delineating the overall structural outline and, if possible, the number of rooms; clarifying if structural remains are present in areas where surface rubble is lacking; identifying the location of the structure’s back wall; understanding the articulation between walls that are seemingly unconnected to the great house’s floor plan; distinguishing the shape of the blocked-in kiva (the circular of Puebloan

populations or square of Mogollon populations); identifying the presence/absence of a great kiva; and identifying the presence/absence of a suspected Chaco road. If Largo Gap contained the majority of these typically “Chacoan” features, then it would support the interpretation that great houses were regionally integrated in terms of a social concept of monumental architecture.

II. Summary of Results

Monumental architecture forms the core basis by which we interpret participation in a regional phenomenon in the American Southwest. This case study employed two spatial technologies to map the monumental architecture of the Largo Gap great house. We use these combined spatial technologies and associated topographic data to counteract the impacts erosion, significant historic stone robbing, and modern ranching have had on understanding the structure’s surface expression, and to characterize this particular suite of monumental architecture using minimally invasive means. Our approach balanced obtaining specific architectural signatures relevant to determining Largo Gap’s participation in a Chaco regional system while also broadening our spatial and analytical scope to expand beyond using surface wall alignments to form socially contextualized interpretations for the site.

Through these efforts, we identified approximately 32 rooms, 10 of which were not visible on the surface. When draped over a topographic map, the combined datasets provide a much more accurate map of the Largo Gap great house than could be generated by surface inspection alone. Prior to our investigations, Largo Gap had very little surface expression and appeared to be much smaller than contemporaneous great houses; in other words, Largo Gap appeared to be a low quality emulation of a regionally defined form of monumental architecture. Our investigations, however, firmly place Largo Gap within the same size category as other great houses from across the identified great house distribution, in part due to the number of rooms with no surface expression delineated within the aerial thermography. The overall outline of the great house also forms a “D-shape” that is characteristic of several Chacoan structures. Linear signatures within the aerial thermography potentially differentiate between compound walls versus single wall construction. This suggests another avenue toward understanding Chaco-style wall construction without the need for intensive excavations. Contrary to previous investigations, we found no evidence for a great kiva; the presence of an entrance road is still unresolved, although no evidence for a built landscape associated with a potential road (e.g., side berms or swales) were identified.

Our results stress the importance of integrating multiple spatial technologies in investigating architectural form. Largo Gap is a much larger structure with a more extensive architectural footprint than was previously identified. The great house contains several elements consistent with Chacoan architectural conventions, including a central blocked-in kiva, a bounded plaza, an overall “D-shaped” construction, at least one compound wall, and is constructed in an elevated, prominent location. The results also suggest that a combination of aerial thermography and ground penetrating radar with topographic mapping are an ideal combination for studying architectural features whose surface expression has been altered or significantly impacted by erosion or modern activities. Employing these combined methods at some of the other Pueblo II great houses that have had limited surface investigations but substantial historic impacts would

further define the extent to which great houses appear to have been well-integrated into a regional conceptualization and use of monumental architecture.

III. Presentations and Publications Completed

-2015 Safi, K., A. Weiwel, K. Simon, A Duff. *Mapping the Monumental Architecture of the Largo Gap Great House*. Paper presented at the 80th Annual Meeting for the Society for American Anthropology, San Francisco.

-2015 Simon, K., A. Wiewel, E. Ernenwein, K. Safi, and C. Klehm. *The Near and Far: How Aerial Thermography Can Elucidate Findings in Ground-Based Geophysical Datasets*. Poster presented at the 80th Annual Meeting for the Society for American Anthropology, San Francisco.

IV. Presentations and Publications In Press / Planned

Publication based on the combined aerial thermography and GPR results is in preparation for submission to the *Journal of Archaeological Sciences*.

