

## BOOK REVIEW



*A Space Syntax Analysis of Arroyo Hondo Pueblo, New Mexico: Community Formation in the Northern Rio Grande* by Jason S. Shapiro. 186 pp., 11 halftones, 26 line drawings, 18 maps, 12 tables, Foreword, References, Index. School of American Research Press, 2005. \$24.95 (Paper). ISBN 1-930618-59-X.

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Jason S. Shapiro's space syntax analysis is the ninth and most recent addition to the Arroyo Hondo Archaeological Series, a collection of monographs dedicated to the examination of a fourteenth- and fifteenth-century ancestral Pueblo settlement located five miles southeast of Santa Fe, New Mexico. Excavated by the School of American Research (now the School for Advanced Research) under the direction of Douglas Schwartz in the 1970s, Arroyo Hondo remains one of the most comprehensively documented and intensively studied pueblos in the northern Rio Grande region. As Schwartz notes in the Foreword to this volume, Shapiro's study marks a new era in the investigation of Arroyo Hondo, as this is the first monograph to move beyond the primary goal of description of excavated materials to a reanalysis of these data from new perspectives. Shapiro's study is an excellent example of the burgeoning and welcome trend toward the reexamination of previously excavated sites in recent years, a result of the decline in large-scale, multiyear academic excavation projects throughout the Southwest (of which the Arroyo Hondo Project was an exemplar). Building upon earlier architectural studies of Arroyo Hondo by Winifred Creamer (1993) and John D. Beal (1971, 1972), Shapiro applies the quantitative analytical approach of space syntax analysis (Hillier and Hanson 1984) "to study the process of organizational change by analyzing the process of architectural change" (p. 6).

In seven chapters and three appendices, Shapiro provides succinct summaries of previous studies of Pueblo social organization, the history and architecture of Arroyo Hondo, and the theory and method of space syntax analysis, as well as a detailed investigation of spatial organization at Arroyo Hondo and comparisons with other sites in the northern Rio Grande (Tijeras Pueblo, Puyè, and Acoma). Neophytes to space syntax studies will find his clear and concise

explanation of this complex method particularly useful. Arroyo Hondo is exceptionally amenable to space syntax analysis because it was extensively excavated (approximately 150 rooms were dug, representing virtually all of the pueblo's 24 roomblocks) and produced an abundance of tree-ring and archaeomagnetic dates, allowing for a unique understanding of the chronology of its architectural features. The site apparently housed two distinct occupations—one from 1300 to 1345 and another from 1370 to 1425—spanning the Rio Grande Coalition (1200–1325) and Classic (1325–1600) periods.

Shapiro's analysis reveals three significant shifts in spatial organization between the Coalition- and Classic-period occupations: 1) the later Classic-period architecture was more segregated and private than that of the Coalition period, suggesting a shift in social organization from a focus on the extended family and/or clan to the nuclear family/household level; 2) the Classic period architecture suggests an increased emphasis on plazas as primary public and integrating spaces; and 3) while the Coalition period exhibits more accessible public/communal food storage areas, the Classic period architecture reveals a shift toward more restricted access to food storage areas, indicating the increased importance of private food storage. Similar patterns are noted at the contemporaneous sites of Tijeras and the south house of Puyè Pueblo. The obvious question is, of course, why did these changes occur? Rather than focusing on standard explanatory factors such as the physical environment as the driver of social change, Shapiro instead suggests that the changes manifested in the architecture of Arroyo Hondo reflect changes in the ability of the inhabitants to control their social environment. Were these changes the result of the introduction of the katsina cult? Or a substantial migration into the region and concomitant population increase? Or both? Shapiro refrains from hazarding a guess, limiting his interpretation to the data at hand. He is satisfied to note that during the late fourteenth and early fifteenth centuries in the northern Rio Grande, *something* resulted in changing spatial arrangements that stressed plazas as integrating spaces and residential structures as areas of segregation, although he does cautiously suggest that these changes "might be the physical manifestation of a hierarchy expressed through esoteric religious knowledge" (p. 93).

*A Space Syntax Analysis of Arroyo Hondo* is an excellent study, and Shapiro is to be commended for his enlightening and diligent analysis. The comparisons with contemporaneous pueblo sites are particularly informative, and this study builds a strong case for the need for further investigation of the architectural and social changes that occurred in the northern Rio Grande during the Coalition-to-Classic transition. Additionally, this volume reiterates the value of reanalyzing existing data from new theoretical and methodological perspectives. It is lucidly written and skillfully illustrated, with an abundance of maps and graphs that complement and enhance the text, making clear the often-complex quantitative calculations involved in the space syntax method.

There are few areas in which this study could be improved, but a slightly updated bibliography would be welcome. Only 7 of the 226 references post-date 1997 (which is also the date of Shapiro's dissertation, upon which this volume is based), although some of this can undoubtedly be attributed to the lengthy publication process. Also, the integration of additional categories of data to complement the space syntax/architectural analysis would be useful. With the rich artifactual record of Arroyo Hondo, limiting the discussion exclusively to architecture would seem to overlook other potentially enlightening sources of information. Examining concomitant changes (or lack thereof) in the ceramics, faunal remains, skeletal and mortuary remains, and climate (all of which have been the subjects of previous monographs in the Arroyo Hondo Archaeological Series) could possibly shed additional light on the architectural changes documented by the author.

Overall, however, Shapiro's study is an innovative and important addition to the investigation of Pueblo architecture and is highly recommended. This volume should be in the library of any serious student of the pre-Hispanic Southwest, Pueblo social organization, space syntax analysis, or the archaeology of the built environment.

## REFERENCES

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Hillier, Bill, and Julienne Hanson

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