Incorporating the Outdoors as Living Space

Ethnoarchaeology at Zuni Pueblo, New Mexico

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People's houses both define and are defined by their lives. The material and permanence of houses are related to the nature of the environment in which they are located, and to how residents make their living. But beyond this basic level, the spatial order inside and outside houses will vary widely among societies. The question for us as anthropologists is, Do differences in the organization of space imply meaningful cultural or social differences, or are they the result of historical accident or random events? I will compare the spatial organization outside the houses of two groups of people, the Zuni of western New Mexico and Euro-Americans. The houses themselves do not look very different. However, we will see that there are real differences in the use of exterior space that reflect the different attitudes toward the natural and constructed environments of members of these cultures.

The research involved focuses mainly on the Zuni, a native American people. Some details of Euro-American spatial organization are presented to help delimit the contrast in attitudes. An archaeological approach that analyzes activity areas in terms of the patterns formed by remants of the activities allows us to perceive this contrast, which may not be explicitly recognized by the occupants of the houses.

Euro-American Homes

Contemporary Americans live in many types of houses, from apartments in glittering skyscrapers to rural cabins. However, if one asked people (both members of the society and outsiders) what the characteristic Euro-American house looked like, most would probably identify some form of single-family suburban home. Such a home is basically rectangular in layout, one to three stories in height, and set on a plot with a front yard (accessible to the public and casual visitors) and a back yard (more protected and private). The plot is defined by certain symbolic or real boundary markers. Roads or driveways, walkways, fences, walls, trees and other forms of planting all serve to limit the spatial unit.

This housing form is associated with a particular family form, consisting most stereotypically of what is referred to as "the nuclear family," a two-generation unit of parents and children. There are some signs that this dominant family form may be changing in Euro-American culture, but it is too soon to know if the stereotype is changing as well. There are, in addition, certain kinds of activities that would be expected to occur in various rooms in the house, and in various segments of the outdoors, weather permitting.

Structured ideas about space and its uses exist at the level of individual residential structures and at other levels, including that of the community (Leone 1973; 1984). Conrad Arensberg (1928) wrote about regional variations in Euro-American communities, showing that each type derived from a particular historical European antecedent, and was associated with a characteristic form of socio-spatial organization and frequency of interaction. So the colonial New England town had an English ancestral form, was united around a town square and a single church, and was governed by the town meeting. It was a close-knit egalitarian community; interaction was face-to-face, and occurred on a daily basis. In Arensberg's second type, the southern county, based on a western European model, farmers or planters lived at some distance from each other, and within a day's ride of the county seat. They met...
**Zuni Housing**

The Zuni live on land that they have occupied, according to written history, since at least the mid-16th century (Ferguson and Hart 1985:89), but that was occupied prehistorically by the Anasazi, from whom they may be descended. The Zuni people now live on a reservation that was created in the late 19th century (Fig. 3); it consists of only a tiny fraction of their traditionally used lands (Ferguson and Hart 88).

Zuni society today is based on a cash economy in which wage labor, silversmithing and other craft activities, and welfare are supplemented to some degree by the more traditional activities of shepherding and agriculture (both for subsistence and for animal fodder). Many members of the tribe live in and around the main pueblo, which has been in existence since the 15th century (Kinstigh 1965:70), although modified frequently and rebuilt. Five stories high at one time, entry by means of ladders through the roof, the pueblo has been considerably modernized in architectural detail, but retains much of its original character (Figs. 1, 2).

The pueblo is not large enough to house all Zuni residents, nor has it been in the recent past. Today a number of housing clusters similar to "sub-divisions" have been built with federal assistance. These look similar to the "typical" Euro-American house described above, but the existence of houses that look alike does not mean that they are used alike. One example of an important difference is in the family unit occupying a "modern" Zuni house. While the residential unit may be a nuclear family, it is much more likely to consist of an extended family, with grandparents, sisters and their children, and a variety of other relatives added to the basic nuclear group.

The space around the houses also looks different from a Euro-American house lot. It does not appear to be partitioned into front and back yards, and often it does not appear horticulturally at all. To the eyes of a non-Zuni observer (as reported to me) this may look "messy" or disorganized. In many North American towns, of course, the definition of yards is based on the presence of grass; the Zuni would think that taking scarce water resources to grow grass would be wasteful and inappropriate. However, I think that another source of the difference between the appearance of a Zuni and a non-Zuni plot of land is the different conception of their spatial structure.

**Zuni Farming Villages**

In order to examine the spatial organization of Zuni house lots, we mapped a series of houses in three farming villages, 19th century communities that lay outside of Zuni Pueblo. These villages were built in either the 18th or the 19th century (although at least two were built on top of earlier historic sites, and they were occupied by members of the tribe on a seasonal basis, where they served as a base for farming and herding (Mills and Ferguson 1980). In the 1950s or 1960s these occupations became difficult because of soil erosion and the lowering of the water table, and population began to decline (Ferguson 1989). There are a series of these villages, built using traditional architectural materials and methods, adobe, mortar and plaster, and roofs of logs covered with brush and dirt. They are found at distances of 10 to 20 miles from the main pueblo. They have been virtually unoccupied for the last 50 years, although the houses are used and the village is currently occupied, while others are still used on a daily basis for storage or simply to maintain a large spring. Upper Pescado lies along the major road to Zuni Pueblo and was recently electrified, causing some increase in year-round occupation. There are about a dozen houses in its agglomerated or core area.

Some of these villages were studied in 1979 (Mills, Holmes, and Ferguson 1982) under the auspices of the Zuni Archaeological Program directed by Roger Anyon; other villages were recorded in 1989 (Cruzen and Proulx 1986). The group of students from Barnard and Columbia under the direction of Susan Dallas and myself. We were particularly interested in these Zuni analogs to the freestanding homes of Euro-American suburbs. They seemed to be an intermediate stage between traditional structures (often contiguous with other houses in the village) and those found in the more recent housing settlements built with the assistance of the federal Housing and Urban Development Program. If we believe that house plan, as well as other aspects of the organization of space, bears a relationship to social form, changes in plan are worth of investigation.

The three villages that we focused on in the 1989 study were Lower and Upper Pescado and Lower Nutria (Figs. 4, 5). Lower Pescado is the smallest of the three and was built on the ruins of a prehistoric village. It consisted in 1899 of only three intact houses and the ruins of a half-dozen more, with the eroding walls of prehistoric structures visible on the surface. Upper Pescado, according to informants, was originally part of the same social community as Lower Pescado; the two are approximately a mile apart, lying about 15 miles to the east of Zuni. When harvesting help was needed for durango or feast occasions when games were played, both villages would be involved. Both upper and lower Pescado were once farms. Upper Pescado River for farming. Upper Pescado has obtained some water from a large spring. Upper Pescado lies along the major road to Zuni Pueblo and was recently electrified, causing some increase in year-round occupation. There are about a dozen houses in its agglomerated or core area. Lower Nutria, to the northeast of Lower Pescado, was obtained water from the Nutria River. It is fairly close to Upper Nutria (Figs. 4, 5) and seems to have had the same kind of social relationship with it that Upper and Lower Pescado had. Some houses in Lower Nutria were built on and around a bedrock that is close to the surface (Fig. 6); it forms house walls and a thriving floor. The village was somewhat larger than Upper Pescado, with between 15 and 20 structures in its core area. And it is unique among the villages we examined in that some of its structures were multi-family units, housing two or three families.
The Study of Architecture and Artifact Distribution

Archaeologists are interested in how people lived in the past. This curiosity extends to what kinds of things people did, and where they did what they did. The places where certain activities were regularly carried out are called "activity areas," and we believe that the structuring of these areas is intimately related to a number of other cultural factors, such as how people made their living (or what kinds of activities were necessary to daily life), and what the social structure of the group, including the division of labor, was like. It is often difficult to identify clearly the spatial organization of activities in the past. Ethnoarchaeology allows us to look closely at some of the interconnections between detailed aspects of life in the present and reflections of these details in the material world. By understanding these connections in the present, we will enhance our ability to understand them in the past.

Figure 5. Another area of Upper Nutria village has several houses that are "maintained" (meaning they have intact roofs). Notice the variety of materials used for building and repairs. This is typical of the way structures are maintained at Zani.

In addition to recording architectural details (the number and placement of windows and their shape, materials, and measurements, for example, or wall construction elements), we also mapped the location of objects outside of houses. These fall into two categories: there are items, mostly small, scattered on the ground—bottles, pieces of glass, fragments of clothing, bits of metal, old tires—and there are larger things such as wood and stone piles, old oil drums recycled as trash receptacles, burned garbage dumps, bread ovens, and the like. Some of the latter items are what archaeologists call "features," small components of a site associated with specific activities (these may include hearths, dumps, sleeping areas, and the like). There are a number of types of features surrounding the houses in the Zani farming villages that can be tied to particular activities. Most houses are accompanied by several of the following: hearths; circular stone and dirt-outdoor ovens used for baking traditional bread; piles of a variety of re usable materials (stones, wood, mud or adobe bricks; Fig. 7); trash dumps, either within a container such as an oil drum or on the ground; and outbuildings. There are also a variety of sheds, corrals, and animal pens (Fig. 8) around the houses. The land around the agglomerated housing area was extremely important for farming and herding, and for other communal activities such as threshing. These villages are notable for their lack of any kind of ritual architecture such as kivas; all ceremonial activities took place in the main pueblo of Zani during the winter.

Analysis of Spatial Patterning

In the present analysis I have focused on features that are assumed to relate to the use of the house as a residential structure. (For example, I did not include piles of reusable construction materials because these may date to a period after the house's primary use, or when some destruction or rebuilding was being planned). I plotted the locations of these features around the houses in Lower Nutria, and Lower and Upper Pescado, then considered what kinds of features were there—where they were located (near the major door, or alongside a wall that does not have a door), and how far from the nearest wall of the house they were. I assumed that if the space around these Zani houses had a characteristic structure, there would be a regular and identifiable pattern for the placement of these features. Further, such a pattern would imply a predictable set of activities that took place outside of houses, some of which were tied to these features.

Several such patterns do emerge. One is defined by the presence of items such as firewood piles and hearths, and by the organized disposal of household refuse, often in oil drums. These features are almost always placed along the wall of the house in which the major door is located, within about 5-6 meters of the wall. They are placed parallel to the wall, and within a space defined by the extent of the wall, or spanning out from the front door (Fig. 9). Other types of features such as out- houses and ovens are located in a different pattern vis-a-vis the house. Outhouses, which are relatively rare,

Figure 6. Looking south towards a house in Lower Nutria that is built against an outcrop of bedrock. This house is still used, although it is not occupied on a daily basis. It has been well maintained.

Figure 7. This photograph was taken in Lower Nutria from in front of a house that faces east. It shows a woodpile and the remains of some fencing used to keep livestock penned. Beyond the fence are a house and a hay storage structure built by a Euro-American man married to a Zani woman. The style of both these structures is typical of Zani architecture.

Figure 8. Students measuring the height of a simple log structure once used to shelter cows or horses but now abandoned. It is from the farming village of Upper Pescado.
are mostly found at a greater distance from houses than the features just described, and are located off of a wall perpendicular to the front wall. Ovens are found either behind or in front of houses, at a distance of from 10 to 20 meters. Since the majority of ovens are sited to the south of houses, it seems reasonable to suggest that their location related to prevailing wind direction. There are other natural conditions that may affect the organization of outdoor space. For example, as mentioned above, Lower Nutria was built on bedrock, and some of its houses were located so that the rock formed one wall.

To interpret this patterning in terms of activities, we see that one set of everyday routine actions involving keeping houses warm and kitchens clean is conducted near the front door, where it is most convenient. Outhouses are segregated, presumably because they represent health issues or notions of pollution. And ovens are more distant, because of the danger of fire. In addition to the information on activities derived from the placement of features, we can also get some insight into the use of outdoor space by examining the patterning in the distribution of discarded artifacts, namely those found on the ground outside of houses. We recorded these artifacts and classified them into use-related categories; included were broken pottery, food remains (mostly bones), bottles and cans (and broken glass), toys, auto and bicycle parts, clothing, household objects and hardware, and large items such as kitchen appliances, beds, and agricultural implements.

There are a number of different processes that account for the locations in which these items were found (Schiffer 1987). Some are accidental (affecting mostly small or broken things); there may be several displacements and forces involved between the use of the object and where it was recovered. The wind may move things some dogs will transport others. One human activity, namely cleaning up, including sweeping, will also dislodge some small items. In other cases, the objects recovered may still be where they were placed when first discarded. For example, dumping, as a deliberate activity, is usually visible in the creation of piles. Sometimes these consist of one major type of object—e.g., cans—but at other times the dump is varied in its composition. And then there is the discard of large, potentially usable items. Bed parts are often incorporated into fences (Fig. 10); agricultural tools (plows, hoes, and the like) are left near barns or along field boundaries; and kitchen appliances are often left inside houses, or just outside the door.

The displacement of no-longer-used artifacts is also informative as to its use. We observed the clearing of space in front of houses by sweeping; a space with many pieces of broken glass littering the ground is not available for use in the way that a cleared space is (Fig. 11). The space that is broomed is the area in front of the main door, the same space defined by the existence of numbers of the features described above. It seems, therefore, that the most consistently and identifiably used outdoor space in Zuni farming villages is the section along the front wall.

Figure 9. This schematic sketch of a house shows the placement of certain key features that define the way outdoor space is used by the Zuni. The trash dump and woodpiles are usually found along the front wall; the oven may be placed either to the front or the rear, depending on prevailing winds. An outhouse will be located off to the side of a house, at a greater distance than any of the other features noted.

Figure 10. A fence in Upper Pescado that shows the re-use of bed parts (in this case, bed springs) as fencing material. Head- and footboards are also used, sometimes as gates in fences. This is an example of how the Zuni incorporate old, no-longer-functional objects into their everyday lives in new ways.

Figure 11. An Upper Pescado house that is not currently in use. The cluttered space along the front wall reflects this lack of use and shows some "abandoned" kitchen equipment—an old wash tub to the left and a stove to the right of the door.

Sources of Differentiation

The next question is, What is this space used for? More research will be needed to answer this question definitively, but our observations in the summer of 1989 suggest one possibility. At least three houses (two at Lower Nutria and one at Upper Nutria) had benches or chairs outside the door (Fig. 12). These were the houses that were used most frequently. In one of these we observed that conversations, especially with people who might not be well known to the inhabitants of the house, took place at the front door. Longer conversations and those that take place sitting outside the door. It seems as if this area near the door served as a transition zone between the house and the outdoors. People whose period of contact was brief, or who were strangers, could be interviewed in this space. It might also be used for the kind of conversation that conducts, and exchanges information and gossip.

Euro-Americans spend less time talking at house entrances than Zunis do. A doorway conversation is usually very brief and is used only to decide whether to admit someone into the house or not. On the other hand, there is usually an area inside Euro-American houses where conversation with non-intimates occurs. Another setting for this type of contact is the yard, often a space surrounded by field boundaries, over fences, or near roads or driveways.

In contrast, the spatial structure of these two cultures, it is essential to recognize the significant difference between the natural world that exists between Zunis and non-Zunis. The Zuni recognize the environment and feel its place in it; structures and communities are aligned with reference to the cardinal directions, and the world is perceived as having a harmony and order. Euro-Americans are concerned for their efforts to dominate the environment. Grid patterns and other attempts to impose regularity and structure on the natural world are seen in many contexts, from cities to subdivisions and even parks.

Conclusion

This article, while preliminary, has shown that there are characteristic ways in which the space around Zuni houses is structured, and particular activities that are carried out in that space. It also seems that less of the space around the houses, at least in the villages studied, is claimed for use than it is true for Euro-American residential communities. The remaining exterior space is left as an area of co-existence with neighbors and with the natural world, and is recognizable as such by its lack of alteration.

Another way to describe the difference between the organization of space in these two cultures is to look at what kinds of areas are bounded. In the Zuni farming villages, there are sometimes boundaries between different kinds of use areas (e.g., animal pens may be fenced in), but there are no clear boundaries between the two kinds of use areas, such as houses. One cannot tell where one house’s territory ends and another’s begins. This is due, in part, to the absence of a concept of private property in many tribal societies, but I think it also reflects a cognitive structure that pervades the Zuni organization of space. The idea of fencing is important in Euro-American communities and has had an impact in Zuni, where one resident told me that greater lands did not use to be separated from each other, but are now. Fencing, however, is essentially a form of control and as such would be inconsistent with Zuni ideas about the place of humans in the natural world. An interesting comparison here is offered by Leonne’s analysis of the Mormon use of fences to replicate entire spatial/environmental systems (1973).

In conclusion, then, we can see that the visible differences between
the way Zuni and Euro-American people organize the space around their houses is meaningful and reflects significant cultural factors. It does not imply that there is less regularity in the way the Zuni incorporate the outdoors as living space. It does imply that their attitude toward the natural environment leads them to exert less control, or less visible control, over the land they live on.

This analysis is, in a sense, balanced between archaeology and ethnography. It focuses on Zuni, but employs Euro-American behavior as a contrast to clarify some of the relatively subtle details of spatial organization. Examining structures that have been abandoned only recently allows us access to the complete range of material remains of domestic life, while interviews with some former residents enrich our interpretations. Our ultimate goal is the clarification of the archaeological record and the identification of material signatures of occupation and post-occupation debris. The history of use, "abandonment," and re-use of structures in the Southwest and elsewhere is complex; we are only beginning to understand it.

Bibliography

Arensburg, Conrad

Ferguson, T.J.

Ferguson, T.J., and E. Richard Hart

Green, J., ed.
Lincoln: University of Nebraska Press.

Kintigh, Keith W.

Leone, Mark P.


Mills, Barbara J., and T.J. Ferguson

Mills, Barbara J., Barbara E. Holmes, and T.J. Ferguson

Rothschild, N.A., Barbara J. Mills, T.J. Ferguson, and Susan Dublin

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