The Archaeology of Chaco Canyon
An Eleventh-Century Pueblo Regional Center

Edited by Stephen H. Lekson

School of American Research Press
Santa Fe
(2006)
As I understand it, my role in the Chaco capstone effort is to serve as a "synthetic scholar" (presumably as opposed to the authentic ones who really know something about Chaco) who can comment on the Chaco phenomenon from the vantage point of an adjacent area, in this case, the Northern San Juan or Mesa Verde region (figure 8.1). I address four topics here. First, I discuss how the developments centered at Chaco Canyon employed architectural symbolism derived from some basic cultural patterns widely present in both the northern and southern portions of the San Juan drainage. Wilshusen and Van Dyke (chapter 7 of this volume) develop aspects of this theme in greater detail. Second, I provide some archaeological context for the expansion of the Chacoan Great House system north of the San Juan, including what succeeded it there. Third, because I have been given an opening, I add my two cents worth on how the Chaco system might have worked during its florescent period, from about A.D. 1040 to 1135. This is the period in which Great House building projects grew in scale, Great House architecture became much more formalized and elaborate, Chacoans imported large quantities of construction timbers and
other materials into Chaco Canyon and Aztec, and numerous communities occurring over a very large area of the upland Southwest built Chaco-style Great Houses. Fourth, I comment on whether the Chacoan sociocultural system or something like it continued to be important in the Northern San Juan after the early A.D. 1100s.

CHACO ARCHITECTURAL SYMBOLISM AND THE SAN JUAN CULTURAL PATTERN

What I am calling the "San Juan pattern" is a complex of architectural and settlement layout characteristics that developed in the San Juan drainage in the A.D. 600s and 700s and lasted until the late 1200s. The pattern extended into adjacent portions of the Little Colorado drainage before the Chacoan expansion but does not appear to have persisted in those areas after the middle or late A.D. 1100s. Several characteristics of Chacoan Great House architecture and settlement layout appear to be elaborations on the San Juan pattern. In the period of Chacoan florescence, these elaborated versions helped provide symbolic support for a new, more complex social order by connecting it to historically well-established and widespread architectural and cultural traditions.

The basic, widespread version of the San Juan pattern includes the following: Prudden units, north-south orientation at several scales, and kivas great and small.

**Prudden Units**

From the A.D. 700s through the 1200s, most people in the San Juan drainage lived in relentlessly modular habitation units (Bullard 1962), each of which was occupied by a nuclear or small extended family-based household. Architecturally, the habitation unit includes (a) a single domestic pit structure (usually called a "protokiva" in the Pueblo I period and a "kiva" in Pueblo II and III), (b) a small (five to ten rooms, on average) block of usually contiguous surface rooms of jadal or masonry located just north or northwest of the pit structure, and (c) a midden area located south or southeast of the pit structure. Sometimes the surface rooms are divided into larger, general-purpose "living" rooms and smaller, more tightly built storage rooms. Associated with the habitation unit are burials located in the midden area and/or
within abandoned structures. In multi-unit roomblocks, middens usually extend the length of the roomblock, indicating that individual households continued to deposit trash directly in front of their own habitation unit. Lacking are cemeteries that serve whole communities or particular groups of households within communities.

Scholars sometimes refer to San Juan–pattern habitation units as “Prudden units,” after T. Mitchell Prudden, who recognized them early in the twentieth century. He called them “unit type pueblos” (figure 8.2; see figures 1.4 and 3.11) and noted that they could occur as individual small sites but also as the basic residential modules within roomblocks or house clusters in larger sites (Prudden 1903, 1914, 1918). Household-based habitation units composed of a pit structure and a few surface rooms occurred with some frequency in other parts of the upland Southwest before the A.D. 1000s or early 1100s. Outside the San Juan drainage, pit structures/kivas tended to decrease in frequency after that time and to be associated with multihousehold roomblocks or whole settlements rather than with specific habitation units. By contrast, in the San Juan drainage the kiva remained a central structure at the household level and evidently had domestic, as well as ritual, functions until the end of Puebloan occupation in the late 1200s (Cater and Chenault 1988; Lekson 1988b; Lipe 1989; Lipe and Varien 1999b). Gilman’s (1987) ideas about a “pithouse to pueblo” transition are therefore more applicable outside the San Juan region than within it.

North-South Orientation at Several Scales

Architectural and settlement layouts exhibit a strong north-south or northwest-southeast orientation. The habitation unit faces south, more or less. The pit structure (that is, protokiva or kiva) is bilaterally symmetrical relative to an approximate south-to-north axis extending through the ventilator, deflector, fire pit, and sipápu (if present). Occasionally, a niche in the pit structure’s north wall also lies on this axis, although there may be niches that do not. Often, though not always, an extension of the axis that is grounded in the pit structure approximately bisects the block of associated surface rooms. The middlen area usually lies south or southeast of the pit structure, also (more or less) on the axis established by the pit structure’s floor features. When habitation units are strung together into larger roomblocks and

when habitation units and/or roomblocks are clustered into villages, all these larger entities remain “front-oriented,” to use Erik Reed’s (1956) term. That is, they face approximately south. Trash and evidence of outdoor use areas are very sparse just north of the surface architecture, whether the settlement consists of a single habitation, a roomblock of multiple habitation units, or a large aggregated village.

The directional orientation of San Juan sites, therefore, is expressed at the scale of the habitation unit, the roomblock, and the settlement. I believe that it has a strong symbolic referent, although I do not know the specific meanings associated with it. In any case, the layout and orientation of San Juan habitation units and settlements in the period A.D. 700 to 1300 are distinctive relative to the patterns found at other times and places in the Puebloan Southwest.
Kivas Great and Small

In the San Juan pattern, structures and features having probable symbolic/ideological importance are present at both household and suprahousehold levels. At the household level, Pueblo II and III kivas (and, to some extent, earlier Pueblo I protokivas) show a greater degree of architectural investment and formality than do associated surface rooms, in addition to establishing the habitation unit's north-south axis of bilateral symmetry (for Chaco examples, refer to figure 3.12). The fully or partially subterranean character of these structures, their roof entries, and the frequent occurrence of a sipapu north of the fireplace likely symbolize the universal Puebloan belief in the emergence of humans and other forms of life from a series of worlds lying below the present one. Wilshusen (1989) demonstrates that vault features, which occasionally occur either flanking or north of the fireplace in these pit structures, are related to sipapu and are likely to have similar symbolic/ritual associations. Functionally (no historical connection is implied), San Juan household protokivas and kivas resemble historic Navajo hogans: they are built to a mythologically grounded prescription and therefore express particular religious concepts, they are the core structure in a set of residential facilities used by a household, and they are the appropriate facilities for certain kinds of religious ceremonies. Kidder (1917) was so impressed with the frequency of small kivas at sites in the San Juan drainage that he used the term kiva culture to refer to the Pueblo II-Pueblo III period sites of that area. It is arguable, though not demonstrated, that a few of the small, San Juan-pattern kivas at some large sites (such as the late Pueblo III village Sand Canyon Pueblo) were nonresidential and had more specialized, probably ritual, functions (Bradley 1993; Lipe and Ortman 2000).

In the San Juan drainage, several types of public (or better, civic) architecture also occur. Through time, Great Kivas were the most common such structures, but, as noted below, other types of civic architecture eclipsed them in frequency in the A.D. 1200s. San Juan-pattern Great Kivas clearly repeat the symbolic-ideological references of household kivas, including extending below the ground surface, having bilateral symmetry around an approximate north-south axis, and containing lateral vaults or other pit features related to sipapu (for Chaco examples, refer to figure 3.10). Like household kivas, they are fully enclosed and therefore not "public"—that is, activities taking place there would not have been visible to people unless they had been permitted to enter the structure. Spatially, Great Kivas are usually associated with particular communities (whether or not these communities are more dispersed or more aggregated). Not all communities have one, and they are rare or nonexistent in areas of low population density. The spatial patterning of their occurrence suggests that people from individual communities or clusters of small communities built and maintained them. Great Kivas are not closely associated with particular household-habitation units or roomblocks and are ordinarily located apart from other structures (with notable exceptions at some Chacoan Great Houses).

Lightfoot (1988) estimates that a 22-m-diameter, Pueblo I period Great Kiva located at the Grass Mesa Site in southwestern Colorado could have been built in five to six weeks by forty adult laborers working forty to fifty hours a week. This amount of effort is much greater than a single household could have supplied but is quite feasible for a community of twenty or more households. Alternatively, sodalities or other nonresidential groups possibly participated in the construction or use of Great Kivas.

Great Kivas appeared in the San Juan area as early as the A.D. 600s and occurred through the late 1200s, although with decreasing frequency after the mid-1100s (Churchill, Kuckelman, and Varien 1998). Great Kivas also occurred widely in the upland Southwest outside the San Juan drainage, but it is my impression that these examples generally lack San Juan-type floor features and orientations. Great Kivas persisted in the Northern San Juan until the area was depopulated in the late 1200s.

After about A.D. 1300 this long-lived architectural form apparently survived only in the northern Rio Grande area. In the Classic period (A.D. 1325–1600), there are a few occurrences of large kivas, generally in association with plaza-oriented pueblos. Both circular and rectangular plans are present, and all appear to fall near the lower end of the 10–25-m size range of the Great Kivas surveyed by Vivian and Reiter (1960:84). For example, Creamer (1993:104) reports that Kiva J at Arroyo Hondo dates to the early A.D. 1300s and has a diameter of 10.5 m. Vivian and Reiter (1960:105–106) mention several Classic-period Rio Grande kivas with diameters of 10–14 m (also see Wendrof and Reed 1955:152). Floor features and orientations are variable and do
not clearly replicate earlier San Juan patterns. For the historic period, Ellis (1950) notes that many Rio Grande pueblos had one or two "big kivas" used for communitywide events. Examination of the 1948 aerial photos and maps published by Stubbs (1950) indicates that a number of twentieth-century Rio Grande Pueblo "big kivas" exceed 10 m in diameter.

For other areas of the Southwest, E. C. Adams (1989, 1991) argues that, during the A.D. 1200s, central plazas replaced Great Kivas in aggregated settlements located in the Little Colorado drainage. He also shows how plaza-oriented villages became the norm in both the Rio Grande and the Western Pueblo area in the late 1200s and early 1300s. Kintigh, Howell, and Duff (1996) report that circular, unroofed Great Kivas occurred in the Zuni area in the A.D. 1200s but note that they did not persist after 1300, when large, plaza-oriented villages became standard. Overall, the decline of the Great Kiva as an element of civic architecture appears related to the emergence and spread of the plaza-oriented village pattern.

Chacoan Architectural Symbolism

The main point here is that, for at least five or six centuries, San Juan households and communities employed in their architecture and manner of spatial arrangement a set of powerful symbols, at least some of which referred to widespread emergence/creation beliefs. The architectural patterning of habitation units indicates that individual households had substantial control over the use of these symbols and probably the religious rituals connected with them. This "spiritual independence" may have facilitated settlement pattern flexibility and mobility at the household level and may have also made communities fragile and prone to fission. Over most of the period involved, the typical settlement pattern was one of dispersed households living individually or in small hamlets of several households located near agricultural fields. Communities are recognizable as loose clusters of these dispersed habitations; some have an identifiable "center" consisting of a Great Kiva, a Great House, a denser concentration of habitation units, or combinations of the above. Only episodically in the Northern San Juan (that is, in late Pueblo I and late Pueblo III) do we see communities that are coterminous with a densely settled village (Lipe 2002b; Lipe and Ortman 2000; Lipe and Varien 1999b; Varien 1999; Varien et al. 1996).

What does this have to do with Chaco? It appears to me that the builders of the Chacoan Great Houses took widely used and long-held San Juan conventions of architecture and layout and made them much more formal and much larger-scale. This process of formal elaboration characterizes Great House architecture throughout but is significantly amplified in what I am calling the period of "Chacoan florescence," from about A.D. 1040 to 1135. It is also most pronounced at the major Great Houses in Chaco Canyon and at the Aztec and Salmon sites in the Totah region. Even in this period, Great Houses remained clearly connected to both contemporary and earlier architectural and symbolic conventions that occurred widely in the San Juan drainage. Thus, the occupants of the Great Houses were symbolically linking themselves to the widespread belief system and mode of social organization represented by the San Juan pattern.

If we see Chacoan Great Houses as greatly enlarged and elaborated San Juan-type roomblocks, the number of "regular"-size kivas becomes a better measure of the number of households present in a Great House than is the number of surface rooms. That is, the large size of Great Houses results primarily from a big increase in the number of above-ground rooms associated with each household and, generally, in the size of these rooms. A Great House having multiple, regular-size kivas is equivalent to a roomblock formed by multiple (undoubtedly, related) households in a "regular" San Juan site. The Great Houses, however, have many more surface rooms per kiva (Lipe 1989; Van Dyke 1999c).

In addition to an overall increase in the scale, formality, and elaboration of architecture, as well as in the abundance of surface rooms relative to kivas, Great Houses depart from the San Juan pattern in several other ways. First, although kivas are generally located south of the main mass of surface rooms and the house itself is oriented toward the south, the south-to-north patterning of pit structure versus rooms is not as clear or regular. Second, individual Prudden units, consisting of a pit structure and a distinguishable block of spatially associated surface rooms, are often harder to identify. Third, middens are placed relative to the Great House as a whole (rather than to specific habitation units), are more formally bounded, are generally located at a greater distance
from the architectural elements than is the case in the San Juan pattern, and are often part of a system of constructed earthworks or berms surrounding the Great House (Cameron 2002). Fourth, Great Kivas are sometimes included within the larger Great Houses, making access to them more restricted. Overall, Great House architecture and layout suggest both greater functional differentiation and integration than is the case for the structurally simple and relentlessly modular “ordinary” San Juan roomblocks.

The architectural symbolism associated with Chacoan polities is likely to have been rooted in beliefs and symbolic systems that were widely held throughout most of the San Juan drainage and that long preceded the Chacoan florescence of ca. A.D. 1040–1185 (compare with Wilshusen and Van Dyke, chapter 7 of this volume). Evidently, people began to build Chacoan-style Great Houses in areas south of Chaco Canyon before A.D. 1040 (Kantner and Kintigh, chapter 5, and Duff and Lekson, chapter 9, of this volume), but the distribution of Great Houses reached its maximum extent during the florescent period. Although the Great House system flourished primarily in areas where the San Juan pattern was already established, Chacoan Great Houses and whatever religious ideology they represented also appeared in some communities that did not share that pattern.

The principal example in the Northern San Juan is at Chimney Rock, near the Piedra River in southwestern Colorado (Eddy 1977, 1993). The Chimney Rock Great House is very Chacoan in architectural details and layout, but the surrounding community is represented by “crater houses” (Eddy 1977; Kane 1993). These are large, more or less circular, aboveground masonry structures with walls that are often more than a meter thick. They lack standard kiva features and often have one or two small, adjoined, surface masonry rooms with thin walls. Also, there is a thick-walled Great Kiva that lacks San Juan–style floor features. The architecture and associated pottery of these structures suggest possible relationships to the Largo-Gallina cultural tradition of northern New Mexico (Breternitz 1993a; Kane 1993).

The notion that the builders of the Great Houses at the major Chacoan centers appropriated older and widely held architectural symbols does not imply that the social transformations of the Chacoan florescent period were minor or gradual—nor that the occupants of the small, outlying Great House communities had social prerogatives and interests identical to those of the major Great House centers. The use of familiar symbols representing widely held beliefs may have facilitated development of the labor-intensive institutions and practices from which a new, more hierarchical, and more differentiated social order emerged (practices such as the long-distance transport of timbers, pottery, and maize; construction of Great Houses and roads; development of new ceremonies; and hosting of pilgrims). In the process, new “memories” of what the Great Houses represented could have been constructed to facilitate both the inclusion of people from different communities and the delegation of ritual/political authority to certain kin groups. As Pauketat (2001:6) notes with respect to recognized cultural patterns, “the ‘deep’ thematic qualities that lend an appearance of cultural persistence also [make] the myths, icons, or cosmological themes especially effective political symbols to be displayed, manipulated, and co-opted by social movements or astute politicians” (also see Pauketat and Alt 2003; Van Dyke and Alcock 2003).

THE ARCHAEOLOGICAL CONTEXT OF CHACOAN GREAT HOUSES IN THE NORTHERN SAN JUAN

The expansion of Chacoan Great House architecture into the Northern San Juan was rather late relative to other regions of the Southwest and also included the construction—at Salmon and Aztec—of the largest Great Houses outside Chaco Canyon proper. In the post-Chacoan period, the architectural and community patterns of the Northern San Juan diverged in some ways from those developing elsewhere. These topics are briefly explored below.

Patterns in the Northern San Juan

As noted, Chaco-related Great Houses appeared earlier south and southwest of Chaco Canyon than north of the San Juan. Some southern Great Houses predate the period of Chacoan florescence. The expansion of Chaco influence into the Northern San Juan (Mesa Verde) region appears to be primarily and perhaps entirely in the latter part of the florescent period, after about 1075. Given the cultural and historical similarities between Chaco and the communities of the Northern San Juan, why this area lagged as a focus of Chaco attention is
unclear. Demographic factors may have been involved. Recent population estimates indicate that the Northern San Juan regional population dramatically declined in the A.D. 900s and did not start growing rapidly again until the mid to late A.D. 1000s (Kohler et al. 2005; Ortman, Varien, and Spitzer 2003).

Accompanying the expansion of the Great House system to the north is the construction of several large Great Houses (Salmon Ruin and Aztec West) in the Totah region that rival those of Chaco Canyon in size and elaboration (figures 8.3 and 8.4). (The Totah is the part of the Northern San Juan that includes the lower Animas and La Plata River valleys and the adjoining San Juan River valley in northwestern New Mexico [McKenna and Toll 1992]). Salmon Ruin, a pueblo of 275–325 rooms (see figure 8.3), was largely built in several construction events well dated by tree rings to between A.D. 1090 and 1094 (Paul Reed, personal communication 2004). Aztec West (see figure 8.4) was constructed in two bursts of activity between A.D. 1112 and 1125. It is the largest building in a complex of contemporaneous sites that stretches for two miles along the terrace above the Animas Valley and that includes several Great Kivas and at least one other, unexcavated, massive Great House of the florescent-period Aztec North (Brown, Windes, and McKenna 2002; McKenna and Toll 2001). Brown, Windes, and McKenna (2002) interpret the ceramic associations of the site complex on the Animas terrace near Aztec West to indicate that construction of Aztec North and other terrace sites probably pre-date Aztec West by a generation, making them approximately contemporaneous with the Primary building phase at Salmon Ruin. The construction of Salmon Ruin and the Aztec complex arguably represents a shift in the main seat of Chacoan ceremonial and political power from Chaco Canyon to the Totah (Judge 1989; Lekson 1999).

Lekson (1999) argues that the location of the Aztec complex was approximately due north of central Chaco Canyon intentionally, to fall on the “Chaco Meridian,” which he sees as having formed the symbolic axis of the Pueblo world for several centuries. The “great north road” out of Chaco traces this connection partway. The construction of the Aztec complex thus makes this a “road through time” that physically symbolizes a historical connection between the two major centers. John Fritz (1973) pioneered the idea that the Chacoans located settle-
Undoubtedly, the construction of major Chacoan Great Houses in the Totah between about A.D. 1090 and 1125 contributed to the surge of Great House building throughout the Northern San Juan in the very late 1000s and early 1100s. At Lowry Ruin, the Great Kiva and the nucleus of the Great House were built in A.D. 1089–1090, with additions in kivas, habitation units, and individual settlements. Lekson (1999) thinks that, when the seat of Chacoan power moved from Chaco Canyon to the Aztec complex, the leadership of the Chacoan polity found it symbolically important to locate the new center on the same north-south axis that had structured the arrangement of buildings in central Chaco Canyon. This argument seems to me consistent with the way the florescent-period Chacoans used architecture and the landscape to represent both ideology and political power. The remaining part of Lekson’s Chaco Meridian hypothesis—that a politically powerful Chacoan elite flourished at Aztec until the late A.D. 1200s, then moved hundreds of kilometers south down the meridian to build a major center at Paquimé—seems much more problematical.

Undoubtedly, the construction of major Chacoan Great Houses in the Totah between about A.D. 1090 and 1125 contributed to the surge of Great House building throughout the Northern San Juan in the very late 1000s and early 1100s. At Lowry Ruin, the Great Kiva and the nucleus of the Great House were built in A.D. 1089–1090, with addi-tional construction and probably remodeling in the period A.D. 1106–1120 (Ahlstrom 1985:337–340). The Bluff Great House, located in southeastern Utah, has a noncutting date of A.D. 1111 associated with Chaco-era construction, and pottery assemblages are consistent with a late A.D. 1000s/early 1100s date (Cameron 2002). The Ida Jean Site (an excavated but largely unreported site near Wallace Ruin in the Lakeview Group near Cortez) yielded a cluster of cutting dates indicating kiva construction at A.D. 1124 (Chaco World Database 2004). At the Escalante Site, a small Great House near Dolores, Colorado, the tree-ring, ceramic, and stratigraphic evidence is not entirely consistent (Hallasi 1979), but tree-ring dates from Room 20 cluster at A.D. 1129 and there is a weak cluster of dates from Kiva A in the late 1130s.

Also, there is evidence that some of the region’s Chaco-style Great Houses were built before A.D. 1090 and therefore may pre-date the large Totah centers. At Chimney Rock in the Piedra River drainage of southwestern Colorado, there is a single cutting date of A.D. 1076 from the ventilator tunnel of the East Kiva. Room 8 has a strong date cluster at A.D. 1093, and the East Kiva also yielded a cutting date of A.D. 1093, which Eddy (1977) interprets as indicating remodeling (Ahlstrom 1985). Far View House on Chapin Mesa in Mesa Verde National Park may have been a Chacoan-style Great House when it was constructed in the Pueblo II period, but it was extensively rebuilt in the A.D. 1200s and the excavation reports (Fewkes 1917, 1922) are too sketchy to provide an understanding of construction sequences. Cutting dates from the site range from A.D. 1018 to 1243 (Robinson and Harrill 1974; Chaco World Database 2004).

Bradley (1988) argues that the Wallace Great House (located in the Lakeview Group near Cortez, Colorado) began in A.D. 1045 as a very small, two-storied complex of rooms. Four groundfloor rooms with a second and, in one case, a third story are assigned to this early stage of construction. Bradley (1988) infers that the total groundfloor footprint at this stage was five to ten rooms and a kiva. The bulk of construction at the Wallace Great House appears to have been in the very late 1000s or early 1100s (Bradley 1988) when the site grew rapidly to approximately seventy rooms. The tree-ring dates from the initial stage of construction at Wallace include one date of A.D. 1071; the dates from the 1040s possibly represent beams recycled from an earlier building in the
locality. That people built a tiny "Great House" in 1045 and then did not expand it for another fifty or sixty years seems unlikely.

In general, both the ceramic and tree-ring evidence indicates that the burst of construction of Chacoan-style Great Houses in the Northern San Juan falls between about A.D. 1075 and the A.D. 1130s. Additional research will be necessary to determine whether most of this construction occurred after A.D. 1090 (that is, after major centers were initiated in the Totah) or whether Northern San Juan Great Houses began to be established even before A.D. 1075.

In the middle 1100s, after construction of classic Chaco-style Great Houses apparently ceased in the Northern San Juan, the regional population may have declined or at least stabilized in response to severe and prolonged drought (Dean and Van West 2002; Lipe and Varien 1999b). The archaeological tree-ring record from the central Mesa Verde region shows a lull in construction, with harvesting of beams declining and then staying at a low level from about A.D. 1150 to 1200 (Lipe and Varien 1999b; Varien 1999). Ceramic-based dating of a broad-based sample of sites (Ortman, Varien, and Spitzer 2003:figure 10) indicates, however, only a slight drop in regional population between about A.D. 1140 and 1180, followed by renewed population growth. More recent work in the central Mesa Verde region (Kohler et al. 2005) indicates that population continued to increase during this period. Both the beam-harvesting and the ceramic data indicate that regional population reached an all-time peak in the early to middle 1200s, with a rapid final depopulation in the late 1200s, probably in the late 1270s and early 1280s (Lipe 1995; Lipe and Varien 1999b). The San Juan architectural and layout pattern continued to flourish in the region until the end of occupation, although the size of community centers and the kinds of civic architecture changed during the last several generations (Lipe and Ortman 2000; also see discussion in this chapter).

During the late A.D. 1100s and 1200s, people continued to use Chaco-style Great Houses built during the 1075–1135 period, but many of these became spatially peripheral to the community settlement pattern as the community centers relocated to canyons and canyon rims. In the Totah region, however, the large Great Houses at Salmon and Aztec evidently continued to function as community centers in both a population and a ceremonial sense (Brown, Windes, and McKenna 2002). Many of the smaller, outlying, Chaco-era Great Houses also appear to have had residential use during the late A.D. 1100s and 1200s (for example, Cameron 2002; Ryan 2003, 2004), but whether the occupants had special status or the houses were also used for important rituals is not clear.

Patterns in the Greater Southwest
As these post-Chacoan developments unfolded in the San Juan drainage in the A.D. 1200s, population was growing rapidly in the Rio Grande, the Little Colorado drainage, and the Mogollon Highlands. In the latter two areas, patterns of domestic and civic architecture and of site layout contrast strongly with those of the San Juan region. Lacking are small "household" kivas and the highly modular habitation units formed around such kivas, as well as strong north-south orientations. The ratio of kivas to surface rooms is much lower, and kivas are usually larger and more variable in form and formality. They also are not closely associated with specific small blocks of surface habitation and storage rooms. Habitation sites increased in size, and plaza-oriented layouts became common. An example is Broken K Pueblo, which dates between approximately A.D. 1150 and 1280 (Hill 1970:8) and is located in the Upper Little Colorado drainage (figure 8.5).

In the northern Rio Grande, the same shifts were taking place, but the timing was more variable. Unit-type habitations, each with a kiva and a small block of associated surface rooms, continued to be built in some locations through the Early Coalition period (A.D. 1200–1250). Kohler and Root (2004:213) note that on the Pajarito Plateau kiva-to-room ratios in the Early Coalition ranged from 1:8 (typical of the San Juan pattern) to 1:24. The layout, directional orientation, and kiva features of most of these habitations do not conform very closely to San Juan formats, but there are some exceptions. In the Late Coalition (A.D. 1250–1325), plaza-oriented pueblos (for example, the late component at Burnt Mesa Pueblo [Kohler and Root 2004]) became common on the Pajarito Plateau and elsewhere in the northern Rio Grande. These sites typically have very low ratios of kivas to rooms, and the kivas are frequently located in the plaza. Smith's (1998) survey of northern Rio Grande kivas indicates, however, that a few Late Coalition sites
continued to have high kiva-to-room ratios.

The widespread trend during the A.D. 1200s was for settlements outside the San Juan, including the Rio Grande area, to become increasingly "plaza-oriented," instead of "front-oriented" (E. C. Adams 1989, 1991; Reed 1956). That is, the roomblocks appear to be oriented to the plaza rather than to the south or southeast (Lipe 1989). The shift away from the San Juan type of layout seems to be complete by the early 1300s.

The distinctive architectural complex that characterized central Mesa Verde–area villages in the late A.D. 1200s did not "make the trip" to the Rio Grande or Western Pueblo areas when the Northern San Juan was depopulated (Lipe and Lekson 2001). This complex included not only San Juan–pattern habitation units and front-oriented settlements facing south or southeast but also D-shaped, multiwalled civic structures, enclosing walls, towers, blocks of storage rooms, and bilateral layouts. Instead, the architectural and site layout patterns that had initially appeared outside the San Juan drainage in the late 1100s and 1200s became the norm for the Pueblo world. These settlements look much more like those of the historic-period Pueblos than like San Juan settlements, including the ones we call "Chacoan." By the early 1300s, aggregation into village-size Pueblos had also become standard. Dispersed community patterns of the sort that had characterized San Juan (including Chacoan) communities became increasingly rare, and individual households appear to have become more dependent on their "pueblo" for physical security and spiritual welfare. Early on, Steward (1937) recognized the social implications of these architectural and community pattern changes.

I think that these shifts in the character of household facilities and community settlement patterns represent the spread and development of a mode of community organization that de-emphasized household political and religious (though perhaps not economic) autonomy and that could organize large groups of people without concentrating power in the hands of particular individuals and small groups. Rather, what knit the community together were multiple sodalities and the parceling out of ceremonial and political authority to multiple individuals and groups with resulting checks and balances. The religious ideology associated with this shift undoubtedly incorporated elements of earlier belief and symbol systems from the San Juan and other (for example, Mimbres?) areas in a new configuration that also included innovative elements.

The demographic and social upheavals of the A.D. 1200s and 1300s provided fertile ground for the spread of the katsina cult (E. C. Adams 1991). Crown (1994) also discusses the appearance and spread of a more generalized "Southwestern regional cult" in areas outside the San Juan drainage. The organizational and ideological changes of the late 1200s and early 1300s therefore resulted in a substantial transformation of Puebloan society that had not been accomplished by the elaboration and expansion of the Chacoan system in the late A.D. 1000s and early 1100s. In this sense, the Chacoan florescence can be seen as a brief flirtation with sociopolitical hierarchy, one that incorporated many existing cultural patterns and probably did not result in the restructuring of social relations in most of the smaller communities outside the major Chacoan centers. The San Juan architectural and
settlement pattern appears to reflect an emphasis on the sociopolitical autonomy of households and of groups of closely related households. This type of community organization may have provided a context in which some families or kin groups transformed themselves into local and perhaps regional elites with considerable social power. By contrast, the social, religious, and settlement systems that developed south of the San Juan in the 1200s and spread throughout the Pueblo world in the late 1200s and 1300s appear designed to emphasize community integration at the expense of household political autonomy and to prevent individuals or kin groups from gaining control of multiple reins of power.

CHACO FLORESCENCE: A.D. 1040 TO 1135

I do not think that we would have a Chaco Synthesis volume if the “Chaco florescence” had not occurred. What I mean by this label is the approximate century in which (1) large-scale, planned construction of very large, highly formal Great Houses took place, first at Chaco Canyon and then in the Totah area to the north; (2) large quantities of construction beams, pottery, exotic goods, and probably maize were imported into Chaco Canyon (the Totah centers also appear to have imported quantities of construction beams and exotic goods); (3) the distribution of Chacoan-style Great Houses reached its maximum geographic extent; and (4) there was maximum differentiation in formality, elaboration, and scale between Great House architecture and ordinary residential architecture in all areas, that is, in the main Chaco Canyon and Totah centers, as well as in the various far-flung communities with smaller Great Houses that referenced Chacoan architectural models.

I pick the bracketing dates of 1040 to 1135 because these include the major Great House building programs at the two major centers—earlier, Chaco Canyon, and later, the Aztec and Salmon complex in the Totah. Great House building started much earlier than 1040 at Chaco Canyon and, to some extent, in areas south of Chaco, but these efforts do not come close to the scale and organization of construction characteristic of the period of florescence. I concur with Sebastian (1991, 1992a) in thinking that the Chacoan sociopolitical system rapidly and substantially “ramped up” in scale and complexity concurrent with the onset of major building programs at Chaco Canyon about 1040.

The end of the florescent period followed, by a few years, the end of large-scale Great House construction in the Totah (it had declined earlier in Chaco Canyon). In the outlying areas of the Northern San Juan, there was a concurrent end of construction of Great Houses that clearly reference the architecture of the central Great Houses and that contrast markedly with the residential architecture of their surrounding dispersed communities. The latest dates for construction of an outlying Great House come from the Escalante Ruin near Dolores, Colorado, which has a strong cluster of cutting dates from A.D. 1129 and a weak cluster in the 1130s (Ahlstrom 1985). The end of Chaco-style Great House construction and of the florescent period is more clear-cut in the Northern San Juan than in the southern part of the old Chacoan domain, where Great Houses incorporating classic Chacoan features continued to be built into the 1200s (Kintigh, Howell, and Duff 1996).

The following questions have occupied the most recent couple of generations of Chaco scholars: How complex was Chacoan society during its florescent period? How did it work? What was the relationship between the major centers and the many outlying Great House communities? What, if any, was the role of coercive violence in the expansion or maintenance of the extended regional system? From the perspective of a Northern San Juan specialist looking south, I will make a few comments about these questions.

How Complex Was Chaco?

By “complexity” I mean the development of vertical (hierarchical) differentiation, as well as horizontal (division-of-labor) differentiation (Blanton et al. 1981; Mann 1986). Chaco comes across as relatively complex, at least if we are talking about “downtown” Chaco Canyon and Aztec and at least if we are comparing florescent-period Chaco with Puebloan culture and society both before and after that period.

The size and distinctive architecture of the major Great Houses of Chaco Canyon and the Totah offer the best evidence for vertical differentiation. These clearly are “houses” in the sense that they are constructed of elements and conventions with deep time depth in the domestic architecture of the San Juan drainage. Although arguments remain about whether they actually were residences throughout the
period of Chacoan florescence (compare with Bustard 2003), my bet is that they housed (as well as symbolized) an elite segment of the population. We also can argue about just how much the lives of these people differed from those of the rest of the population and about the sources of the social power that sustained them as an elite, but I cannot imagine that archaeology could offer us any clearer evidence of at least two levels of vertical social differentiation. These Great Houses are aptly named. They ostentatiously communicate that the people who lived there were special and were different from the rest of the population—what Mahoney (2001) calls “conspicuous display.” In other words, they were bigger-than-life people living in bigger-than-life houses. That is the message we receive today, and I think that it is the message communicated to people who viewed these structures 950 years ago. These are houses raised to the level of monumental architecture.

The spaces in and around these buildings, undoubtedly, were used for various kinds of gatherings, some of which were exterior and public and some of which were in spaces where entry could be controlled (Cooper 1997). They also were large storehouses, probably primarily for food that the elite used to sustain themselves and, more importantly, for food that enabled them to be generous hosts at various gatherings. These buildings may also have provided space for honored guests and relatives from “out of town,” as well as for other elite social and ceremonial activities.

At Chaco Canyon, mortuary studies provide evidence of differences in status and living standards between those buried at Pueblo Bonito and those at small sites in the canyon. The Great House burials had greater stature, lower levels of infant mortality, and lower frequencies of porotic osteoporosis (Akins 1986:35–137, 2003). Significantly larger amounts of ornaments and exotic materials such as turquoise accompanied Great House burials than small site burials. A group of burials in the northern portion of Pueblo Bonito had the largest amounts of valuable associations, and the subfloor burials of two mature males in this area would measure up to any in the Southwest for quantity and elaboration of burial goods (Akins 1986:116–118, 131–132, 2003).

The much smaller Great Houses outside Chaco Canyon and Aztec seem designed to send the message that the local leaders of these communities were important too. San Juan communities both before and after the florescent period often had distinguishable centers marked by civic architecture of some type and sometimes by the presence of a larger-than-ordinary residential roomblock as the nucleus of a dispersed settlement pattern. Before, during, and after the Chacoan florescence, community religious/political leaders must have controlled the construction of and access to important structures and spaces at the centers of their communities. Having some moderately distinctive architecture at the center of one’s community was nothing particularly unusual for the Puebloans of the San Juan drainage (Wilshusen and Van Dyke, chapter 7 of this volume)—nor, by implication, was the presence of some households and kin groups that exercised considerable influence and authority in certain spheres of community life.

During the heyday of the Great House system, however, the leaders of the outlying Great House communities were evidently more willing to display their status ostentatiously than were the leaders of earlier or later communities in the Northern San Juan. Even the smaller Great Houses contrast strongly with surrounding residences in size, number of stories, and formality of construction. Also, they often have specific features, such as banded masonry, elevated kivas, or associated berms, that reference models at the Chaco Canyon or Totah centers (Cameron 2002; Van Dyke 1999c) and that usually lack local antecedents. On the other hand, the outlying Great Houses are quite variable in size, layout, architectural characteristics, and patterns of access (Van Dyke 1999c), indicating that overseers from the major Chacoan centers probably did not supervise their construction.

Although Chacoan Great Houses publicly display evidence of status differences, and a few “high status burials” have been found, the political/religious elites of both the main and the outlying Chacoan Great Houses remain largely invisible. I believe that this has tended to confuse discussions of Chacoan complexity because many of us, implicitly or explicitly, expect “big men” or “aggrandizing” leaders to drive increases in sociopolitical complexity (compare with Hayden 1995; Mahoney 2001). To use Feinman’s (2000) terminology, such societies exhibit a “network” mode of sociopolitical organization. He proposes a second mode, “corporate” organization, in which leaders represent themselves as acting on behalf of the community or of a kin
group and are therefore much less likely to advertise their status through ostentatious personal display. The Chacoan use of house architecture, instead of individual tombs or monuments, to represent the holders of social power is consistent with this second mode, as is the lack of iconography designed to glorify individual leaders.

Being on the corporate side of this organizational continuum is no impediment to the development of hierarchy and social power; for example, Harappa is high on both the hierarchical and the corporate mode axes in Feinman's model. The major centers (at Chaco Canyon and in the Totah) must have been considerably farther along on the "hierarchical" axis of Feinman's scheme than were most or all of the Chaco-related outlier communities.

At the main centers in Chaco Canyon and the Totah, Chacoan leaders clearly were able to organize large work forces and to hold them to a quite high standard of performance. This is a significant accomplishment because, even if workers are willing to volunteer their time on a complex project, not much gets done without clear direction. Good managerial control is most evident in the construction of large, planned architectural components at the Great Houses. This involved organizing the transport of timbers, stone, water, and mud from various locations, some quite far away, and overseeing their use in the construction of large buildings, often many tens and even hundreds of rooms at a time. Managing these efforts implies the exercise of substantial social power—that is, the ability of individuals or groups to control or direct the actions of other individuals and groups (Lipe 2002b:169; Mann 1986). This is not a claim that the people doing the work were under constant or even frequent threat of physical coercion, although the occasional use of force (actual or threatened) was probably part of the equation. Leaders can also exercise social power by tapping religious motivations, by controlling productive resources, and/or by establishing debt obligations (Mann 1986; Sebastian 1992a).

It must have taken a reasonably hierarchical and efficient political organization, at least at Chaco Canyon and later at Aztec, to make this system work. Organizing large ceremonies, feasts, and work parties requires significant skill and the effective use of authority within established systems of social control. The leaders at Chaco Canyon and in the Totah must have exercised institutionalized social power, not only to construct the major Great Houses but also to conduct the activities that were associated with these Great Houses and that made them influential over a very large area.

One distinctive characteristic of florescent Chacoan complexity was an increase in the number and kinds of materials imported into Chaco Canyon and, to a lesser extent, into the centers at Salmon and Aztec. Chaco Canyon had been a significant importer of pottery and some other goods for more than a century before the florescent period. It continued to be an importer even after 1130, but the scale of importation of most items ramped up in the years between 1020–1040 and 1105 (Toll, chapter 4 of this volume). Many thousands of construction beams were brought in from highlands many tens of kilometers away (Betancourt, Dean, and Hull 1986; Windes and McKenna 2001); there were massive imports of pottery into Chaco Canyon from settlements 60 or 70 km away on the Chuska slope (Toll 2001, chapter 4 of this volume); maize was imported into Chaco Canyon from the Chuska slope and probably from the Totah region as well (Benson et al. 2003); occurrences of distinctive pink chert from Narbona Pass in the Chuskas increased dramatically in frequency after about A.D. 1020 (Cameron 2001); and there were large (relative to the rest of the Pueblo world at the time) imports of turquoise, shell, and other exotic items (Mathien 1997, 2001). The scale of the imports of pottery and probably of maize from the Chuska slope suggests that this area was likely to have been part of a single political and economic system centered in Chaco Canyon. If so, it implies a polity consisting of many communities in an area of more than 1,000 sq km, with a population probably numbering more than ten thousand.

In any case, nothing elsewhere in the Pueblo archaeological record compares to the display of organized social power evident in the construction and operation of the main florescent-period Chacoan centers and in the importation of both mundane and prestige goods. Acquiring parrots, turquoise, copper bells, and the like would have demonstrated the elite's ability to obtain items not available to the general population and also would have displayed connections with other powerful elites far to the south. As we move away from the main centers, my impression is that the Great House outlier communities—at least those in the Northern San Juan outside the Totah—exhibit far less
evidence of social differentiation and exercise of social power. Some of the outlying Great Houses do show evidence that large numbers of rooms were constructed during single building episodes, as opposed to the incremental growth of "ordinary" residences. The scale of even the largest of these building projects, however, is much less than at the central Great Houses in Chaco Canyon and the Totah, and there is little evidence that quantities of building materials were brought in from a distance. The variety and quantity of exotics such as turquoise are also considerably lower (relative to total artifact discard) than at the main centers during the florescent period.

How Did Chaco Work?

I take this to be a question about how leaders in Chacoan society mobilized and employed social power. Leaders can control or direct the actions of other individuals or groups by using or threatening to use physical coercion, by providing or withholding things of value, or by simple persuasion. The "things of value" can include economic goods and services, access to mates, ideological approval, religious benefaction, and protection in wartime. Secular or religious rituals often legitimate social power differentials; the display and manipulation of potent, generally accepted symbols and rituals are regular aspects of the exercise of power (Kertzer 1988). In all but the most despotic of societies, the use of power requires some compliance on the part of those affected by it. In state-level societies, control of an effective bureaucracy is another source of power for the political leadership (Mann 1986), but this would not apply to the Chacoan case.

Sebastian’s (1992a) model for the establishment and subsequent florescence of Chacoan sociopolitical power remains a good one. My personal elaboration of her ideas is as follows: Families or kin groups that controlled the most productive lands in Chaco Canyon were able to become creditors to the less fortunate during occasional environmental downturns. The latter repaid their obligations with labor, some of which helped to enhance water control systems and to expand early Great Houses. Patrons could use both the Great Houses and the water control systems to maintain and promote their own status and political influence. R. Gwinn Vivian (1990, 2001, chapter 2 of this volume) documents elaborate runoff control and water management systems at several locations in Chaco Canyon. The ownership and management of these systems could well have been a context in which social power was regularly practiced and eventually institutionalized. The construction of these systems would have required the mobilization and supervision of a labor force, and an organized labor force may also have been necessary to ensure the proper distribution of water during and after heavy rainstorms.

These developments set the stage for the start of the florescent period, which marks the formation of an integrated polity based in Chaco Canyon that probably included some communities outside the canyon. One strategy employed by the existing political-religious leadership or by an ambitious faction must have been to assert control over major (and, undoubtedly, newly elaborated) ceremonies. Aspiring leaders could assert their ties to supernatural forces and their ability to provide access to spiritual benefits by organizing elaborate ceremonies and feasts, staged in the impressive settings provided by the Great Houses and the constructed landscapes surrounding them. By contributing the labor needed to construct such facilities and by participating in the ceremonies, ordinary people were able to gain religious benefaction (Renfrew 2001). This reaffirmed the elite as gatekeepers for important kinds of religious participation, and the facilities themselves stood as constant public reminders of the elite’s special status and powers and its ability to acquire and organize labor (Wilson 1988).

This does not imply that control of productive lands within Chaco Canyon ceased to be important or that physical coercion, or the threat of physical coercion, was never available to the leadership. The northern Southwest is a big place, however, and its archaeological record is replete with evidence of household and community mobility. Surely, regular physical repression could not have been the principal way to induce people to support the leaders and the institutions that were central to this political-religious system, even at the main centers, and certainly not in relationship to the far-flung outlier communities.

How Were the Main Centers Related to the Outlying Great House Communities?

The kind of system described above—at Chaco and elsewhere in the world of early complex societies—had the capability to expand its influence geographically to incorporate the leaders of communities
located at a distance. Competition among such leaders to acquire status by demonstrating links to the powerful Chaco Canyon centers would have amplified the spread. The evidence that Chaco Canyon was a pilgrimage center (Judge 1989; Renfrew 2001) is consistent with this interpretation. That is, leaders of outlying communities could improve their status and influence in their own communities by traveling to Chaco Canyon to participate in special ceremonies, thereby receiving special benefaction. They may have been expected to bring groups large enough to form work parties and/or to contribute food or other materials.

The point is that this was seen as a reciprocal relationship—the pilgrims obtained benefaction and status, and the Chacoans received labor, materials, and participants in the activities they staged at their Great Houses. This reaffirmed and reinforced the standing of both the central and the peripheral players who, together, made up the “system.” Contemporary pilgrimage centers, such as the Vatican and Mecca, are likewise supported economically by a large body of the faithful, only some of whom directly take part in pilgrimages. In the Chaco case, the larger populace of the region provided support for the pilgrims and work parties, as well as food and other materials to be carried to Chaco, even if not everyone was an actual pilgrim. It also seems likely that the Chacoan elite would have forged alliances with some outlying Great House communities through arranged marriages, in part to forestall the rise of competitive centers close to Chaco Canyon.

The geographic extent of an actual Chacoan polity remains an open question. The system could have worked even if the polity, as such, was limited to Chaco Canyon and later to the Aztec-Salmon locality. Inclusion of the nearby settlements in the “Chacoan halo” (Marshall, Doyel, and Breternitz 1982), however, seems very likely. Also, as noted, the evidence that extensive quantities of pottery, Narbona chert, and probably maize were imported from communities on the Chuska slope (Benson et al. 2003; Cameron 2001; Toll, chapter 4 of this volume) may indicate that the leadership at Chaco Canyon controlled or, at least, formed strong alliances with these communities.

Outside these core areas, however, the distances involved and the substantial variability in outlying Great House construction and layout (Van Dyke 1999c) indicate that the main centers exercised little actual political control over outlying Great House communities, including those of the Northern San Juan. The A.D. 1000s and early 1100s appear to have been a time of generally good summer rainfall, when most people in the Northern San Juan and elsewhere in the northern Southwest were living in small settlements of one or a few households, which commonly were occupied for only a few years or a generation. It would have been difficult for an elite at Chaco Canyon, or later at Aztec, to manage the political affairs of such scattered, mobile populations, and the difficulties would have increased with distance from the main centers.

The power of the political-religious elite at the main Chacoan centers to exert influence over a huge area would have therefore resided largely in its ability to provide (and also to control) special religious ceremonies and events such as feasts and work parties—activities that would enhance the participants’ religious and political status. In addition, gatherings at the main centers would have enabled those attending to exchange information and goods and to find mates. In the Northern San Juan, A.D. 1040–1135 is a time when greater quantities of materials from outside the region are present in site assemblages than in the succeeding 150 years (Lipe 2002b). This indicates effective networks for the interregional movement of goods. Even so, the amounts of long-distance and exotic goods are quite small at most sites outside the main centers.

The successful operation of this geographically extensive system must have required that thousands of people living in many communities over a wide area accept the efficacy of a broadly defined core set of religious ideas, rituals, and symbols. There must have been widespread acceptance of a small set of “ultimate sacred propositions” (Rappaport 1971) that, in turn, were manifested in ritual practice and also supported aspects of the social order. In this view, people may have regarded rituals held at the main centers as the most highly sanctified, but widely held beliefs tied these to local ritual systems as well. Leaders great and small could enhance their own social power by conducting and probably by developing rituals that promised spiritual and, no doubt, material benefaction for those who participated and that also reinforced the nature of the social order within which they played important roles. In some cases, leaders might have aggressively promoted the spread of the ritual-ideological complex or, more likely, of particular rituals with which they were identified.

If the Chacoan ritual-ideological complex was built on the same
widespread beliefs that underlay the San Juan architectural pattern, a great deal of "missionary" work would not have been necessary to build relationships between outlying communities and the main Chacoan centers. Furthermore, nothing in this conception of "how things work" would have required centralized theocratic control in order to spread this kind of system, any more than the spread of the katsina cult in the A.D. 1300s implies centralized control (E. C. Adams 1991). This view also does not imply that the ritual and ideological system was separate from the political system and was merely manipulated by an elite leadership that had largely material goals. As Voffee (2001) argues, accumulating social power at Chaco was probably a means to an end—the end being the successful conduct of widely supported rituals and other events that drew people from near and far and the means being the ability to organize these events successfully.

Moving to a different type of evidence, it seems unlikely that control over scarce productive farmlands or over elaborate runoff distribution systems could have been the basis for extension of a Chacoan polity to higher areas on the peripheries of the central San Juan (geologic) Basin, including most of the Northern San Juan area. In the Northern San Juan, dry farming is possible over large tracts of land, and potential floodwater/runoff farming locations are numerous as well. For the central Mesa Verde region, Van West (1994) has shown that the supply of arable land amply exceeded potential demands, even in dry years. Varien (1999) provides evidence that, in this same area, households frequently shifted their primary fields, indicating that dryfarming locations, though variable in quality, were not confined to just a few situations. Also, outside Chaco Canyon, runoff control devices were ordinarily not very elaborate and could have been constructed and managed by households or other small groups (Rohn 1963; Wilshusen, Churchill, and Potter 1997; Winter 1978).

The presence of perennial streams (the Animas, La Plata, and San Juan) in the Totah region suggests the possibility that irrigation systems were constructed there. At Aztec, Morgan ([1881]1965:210) refers obliquely to the presence of a canal, and Moorehead (1908) states that, in the lower La Plata valley, ancient irrigation ditches could be traced for several miles. At Aztec, management of an irrigation system could have bolstered the leadership's social power, much as the management of elaborate runoff distribution systems may have promoted the development of power differentials at Chaco Canyon. The social order represented by the Totah Great Houses, however, did not develop gradually in place, as at Chaco, but appears to have arrived fully formed, probably the result of colonization from Chaco Canyon proper. In any case, control of irrigation does not seem likely to have provided a way for the Chacoan leadership at Aztec to extend political control throughout the Totah valleys, let alone to the nearby uplands. R. Gwinn Vivian (1990:313, referencing Morris 1939) notes that water tables in the lower Animas and La Plata floodplains were high enough to support crops in these valleys without irrigation and that good river-bottom farmlands extended for more than 30 km from Morris's Site 41 to the San Juan River. This suggests that, in the Totah region, productive farming areas were not highly circumscribed or dependent on irrigation and that it would have been difficult for an elite based at Aztec to gain a monopoly on good farmland.

Systems of land tenure and land dispute resolution appear to have developed in areas of the Northern San Juan where population density became high (Adler 1996; Varien 1999), but there is no evidence that these systems were instituted at a supra-community level or that they were associated with the development of powerful elites of the sort that can be recognized at the main Chacoan centers (Lipe 2002b; Ware 2002b). The types of politico-religious leadership and the institutions responsible for resolving land disputes probably were present both before and after the brief period of Great House construction in the Northern San Juan. In this perspective, local community leaders might have seen a "Chaco connection" as a way of enhancing what they were already doing. It also implies that they had the ability to "opt out" if the relationship turned sour or the perceived benefits diminished.

**Did Chacoans Use Coercive Violence to Control the Northern San Juan?**

Turner and Turner (1999) and Lekson (2002) have argued that the political hierarchy at Chaco Canyon (and, according to Lekson, thereafter at Aztec) exercised control over distant communities by occasionally using extreme brutality as an instrument of intimidation. Kantner (1999b) takes a more generalized view, correlating these
events to the greater instance of social and political inequality in the Pueblo II period. Turner and Turner (1999) focus on the evidence for cannibalism. Kantner (1999b) and Lekson (2002) discuss what Kuckelman, Lightfoot, and Martin (2000) call “EP” (extreme processing) incidents. These refer to cases in which human bodies have been severely mutilated, whether or not cannibalism was involved.

Both Lekson and the Turners assert that the time-space distribution of these incidents indicates that they may have been occasional “lesson-teaching” acts centrally directed by the leaders of a Chacoan polity. I think that this interpretation goes well beyond what the evidence will bear. The underlying assumptions are (1) that there was a strong Chacoan polity from sometime in the A.D. 900s to sometime in the 1200s, (2) that, throughout this period, a centralized political leadership was able to exert substantial control over a large area of the Southwest—essentially, the entire area where Chacoan Great Houses ever occurred, and (3) that violence and especially cannibalism are most likely to be associated with hierarchical political systems. Although I do not doubt that the Chacoan leadership at the major centers had the ability to use some degree of physical coercion, I think that there are serious flaws in the three assumptions used to suggest that this ability extended very widely in both time and space.

It seems to me that the time-space distribution of Chaco-style Great Houses is the best indicator of when and where Chacoan influence was being exercised outside Chaco Canyon and the Aztec locality and, therefore, of the times and places when one might expect to see evidence of physical coercion, if it was being used as a technique of political domination. In the Northern San Juan, small outlying Chaco Great Houses occur widely, from the Totah region north of Aztec to many locations in southwestern Colorado and southeastern Utah. Their construction, however, appears to be confined to a narrow time band, from about A.D. 1075 to 1135. If occasional executions or massacres were an instrument of Chacoan political control, one would expect that the evidence of these events would cluster in this time period.

Many of the best documented and best dated of the Southwestern EP incidents are, in fact, from the Northern San Juan (Billman, Lambert, and Leonard 2000; Kuckelman, Lightfoot, and Martin 2000, 2002; LeBlanc 1999). But nearly all of these fall outside the brief period of Great House construction in the Northern San Juan, and many fall well outside this period. For example, Turner and Turner (1999:383) include Salmon Ruin in a list of Chacoan Great Houses where researchers have found evidence of cannibalism or other violence. Of course, Salmon is a major Great House, but the evidence in question refers to a set of adult and infant remains placed on the roof of the tower kiva when it was intentionally burned sometime after A.D. 1260 (R. Adams 1980; Turner and Turner 1999:326-331). This is at the end of the Secondary period occupation of Salmon by people using Mesa Verde-tradition pottery and at a time when evidence of an effective political hierarchy at Salmon is quite weak. Also, Kuckelman, Lightfoot, and Martin (2002) have recently published evidence that EP, and probably cannibalism, took place in the very late A.D. 1200s after attackers massacred the entire small village of Castle Rock Pueblo. They also report several cases in which extreme violence was inflicted on a few individuals at the contemporary but much larger Sand Canyon Pueblo.

These episodes are consistent with other evidence that intercommunity warfare was common in the middle and late A.D. 1200s in the central Mesa Verde region. Therefore, incidents of extreme violence in the Northern San Juan are not temporally correlated with the brief period when Chacoan Great Houses were being built in the area, or even with the longer period of Chacoan florescence.

Of the EP incidents in the Northern San Juan that could possibly overlap in time with the dates of Chacoan Great House construction, most are at the very end rather than the beginning of this period. They could not have been part of the expansion and consolidation of the system, although some could have been involved in its end or collapse. A well-dated and well-documented group of EP cases from the central Mesa Verde region falls in a narrow time range from about A.D. 1130 to 1160, dates that cover the early part of the severe drought of the middle 1100s. It is also a time when Great House construction had largely ceased. By the 1130s or, at the latest, by the 1140s the Chacoan system as it was during the florescent period appears to have fallen apart. This is likely to have been a time of general social disruption and economic hardship, when perhaps people had scores to settle or when some families or communities were facing crop failure (Billman, Lambert, and Leonard 2000).
Some of the incidents that fall in this A.D. 1130–1160 cluster, for example, the Cowboy Wash case (Billman, Lambert, and Leonard 2000), involved large numbers of individuals. This case, like the later one at Castle Rock Pueblo, could have been the result of intercommunity warfare instead of “state terrorism” organized by a centralized regional hierarchy.

The Southwestern and cross-cultural evidence for extreme violence is abundant, including mutilation of bodies and/or cannibalism. This came about for a variety of reasons and was not strongly associated with hierarchical social formations. Keeley (1996) summarizes cross-cultural evidence showing that massacres of large percentages of defeated groups, as well as incidents of “extreme processing” and cannibalism, occur as part of tribal-level warfare (also see Bullock 1991, 1998). Extreme violence and, in some cases, cannibalism may also take place during the execution of witches as a mechanism of intra-community social control, again, in a nonhierarchical context (Darling 1998). Sanday's (1986) cross-cultural study showed that institutionalized, non-famine-related cannibalism occurred in about a third of her sample of world cultures, indicating that it is neither rare nor confined to a particular type of sociopolitical system. She found cannibalism most often in the context of warfare. The frequency of archaeological cases of extreme violence in the northern Southwest likely is due to the high quality of the evidence obtained and analyses conducted in that area in recent years. Researchers will probably find similar archaeological evidence of extreme violence, including cannibalism, in many other parts of the world when they apply the careful analytical techniques described by Turner and Turner (1999) and Kuckelman, Lightfoot, and Martin (2002).

Kohler and Kramer (2003), however, have recently presented evidence that potentially could support Lekson’s “Aztec hegemony” model for the post-florescent period. They investigated burial data to estimate sex ratios across time and space in the northern Southwest. They find that, in the period A.D. 1000–1100, the central San Juan Basin (where Chaco Canyon is located) has a female-biased sex ratio, consistent with raiding for women. The central Mesa Verde area at this time does not show a significant departure from a sex ratio of 0.5, or equal numbers of males and females. In the A.D. 1200s, however, the Totah region (where Aztec and Salmon are located) shows a strongly female-biased sex ratio, and the central Mesa Verde area is male biased, suggesting that raids for women might have focused on the latter area. The sample sizes are small, but, even though other possible explanations account for the results, the suggestion of interregional raiding from the Totah into the central Mesa Verde region is intriguing. These data are consistent with the Turners’ and Lekson’s hypothesis that “Chaco-sponsored terrorism” continued to emanate from Aztec in the A.D. 1200s, but they do not unequivocally support it either. As noted, cross-cultural surveys of tribal warfare (Keeley 1996; Kohler and Kramer 2003; Sanday 1986) indicate that interregional raiding occurs in the absence of hierarchical social formations. It may have been one facet of the widespread violence that plagued the Four Corners area in the A.D. 1200s (Lipe 1995).

**THE NORTHERN SAN JUAN AFTER THE CHACOAN FLORESCENCE**

The tree-ring record indicates that the period A.D. 1130–1180 was a time of severe drought in the Four Corners area (Dean and Van West 2002). Brown, Windes, and McKenna (2002) argue that the last, large-scale construction event at Aztec West took place between A.D. 1118 and 1125 or 1130. As noted above, the latest outlying Great House—Escalante Ruin—has tree-ring dates in the late A.D. 1120s and 1130s. The onset of the severe mid-1100s drought coincides almost perfectly with the end of large, planned construction events in the major centers of the Totah and with the end of construction of smaller, Chaco-pattern Great Houses in outlying areas of the Northern San Juan. By Chaco-pattern I mean architecturally formal buildings that clearly reference the major Chacoan Great Houses and are spatially separate from and architecturally contrastive with the standard residential architecture of the communities in which they occur.

A reasonable hypothesis is that construction of both large and small Great Houses stopped because drought-related crop failures undercut belief in the benefits of the religious ceremonies and pilgrimages that were vital to the operation of the late florescent Chacoan system. Crop failures would also have undercut the prestige and authority of leaders at both the major centers and the outlying communities.
A histogram of cutting dates from southwestern Colorado and southeastern Utah, assembled by Varien (1999:190), indicates that the mid-1100s drought seriously diminished building activities in the Northern San Juan. Substantial numbers of dates are present from the decade centered on A.D. 1110 to the one centered on 1150. In the decade centered on 1160, however, fewer than ten dates are recorded, a level nearly as low as those recorded for the A.D. 900s, when the area was significantly depopulated. Cutting dates increase in the decades centered on 1170 through 1190 and then show a large increase around A.D. 1200. For the Totah portion of the Northern San Juan, McKenna and Toll (2001:140) assess both ceramic and tree-ring dates as indicating a lull in construction activity during the last half of the 1100s.

This pattern indicates that building activity declined markedly after the onset of the severe and prolonged mid-1100s drought. Whether this also indicates an actual regional population decline is less clear. Increased mortality may have caused some in-place shrinkage of population, but there is no evidence of population increase in adjacent regions, as would be the case with sizable emigration. Furthermore, population estimates based on ceramic dating of a large sample of sites from the central Mesa Verde region indicate either a slight decline in the period A.D. 1140–1180 (Ortman, Varien, and Spitzer 2003) or continued population growth (Kohler et al. 2005). My guess is that the middle 1100s was a time of hardship and “hunkering down” throughout the Northern San Juan, resulting in reduced building activity. Apparently, this also diminished the population’s willingness to invest the time, energy, and resources required to maintain the Chacoan regional system.

What Role Did Aztec Play in the A.D. 1200s?

Lekson (1999) has argued that, until the middle A.D. 1200s, a Chacoan elite continued to reside at Aztec, with Aztec functioning as the political and sociocultural center of the Northern San Juan region. Evidence from both Salmon and Aztec, however, indicates that no large-scale building events were organized at these centers after the early 1100s, that long-distance importation of construction timbers ceased, and that imports of nonlocal pottery and Narbona Pass chert declined dramatically. Therefore, many indicators of centralized and hierarchical social power that made the Chaco florescent period distinctive appear to have been absent at Aztec and Salmon after about A.D. 1130. Furthermore, we cannot rule out the possibility that people abandoned the major Totah Great Houses for a time in the middle A.D. 1100s. It is difficult to conclude that the sociopolitical system of a Chacoan elite remained intact after that date. I will briefly review the evidence of these changes.

Earl Morris, the excavator of Aztec West, thought that the structure was abandoned following the “primary” (Chacoan) occupation and before the “secondary” (Mesa Verde) occupation. He writes, “The building must have remained vacant for a long time to have permitted the elements to have brought about the advanced degree of destruction in various places to be observed beneath the lowest levels at which the second pottery occurs” (Morris 1928:419).

Brown, Windes, and McKenna (2002) argue, however, that surface ceramics at sites in the Aztec complex indicate dates in the middle or late A.D. 1100s and that construction continued on the massive East Ruin through the late 1100s and 1200s. Aztec East has two adjacent, compact, multistoried buildings containing several hundred rooms and a walled-in plaza with a Great Kiva (figure 8.6).

Although researchers have excavated only small portions of Aztec East, they have obtained about three hundred tree-ring dates. Brown, Windes, and McKenna (2002:6) infer that the core portion of Aztec East was built “about the same time that construction was completed at Aztec West” (presumably in the A.D. 1120s). It is clear that subsequent construction was incremental, with a few dates falling between the A.D. 1120s and 1200 (though none between the late 1140s and the early 1160s), followed by several substantial date clusters in the first half of the 1200s.

Brown, Windes, and McKenna (2002:6) state that, in its finished version in the A.D. 1200s, Aztec East’s basic layout and complementary symmetry with Aztec West and other components in the Aztec Ruins Group indicate that the original footprint of the building involved considerable planning and formal conceptual elements, even if construction did not always follow the original plan.

Brown, Windes, and McKenna (2002) conclude that building activity at Aztec East in the A.D. 1200s resulted in completion of a structure
that Chacoans had designed in the early 1100s. They argue that Aztec East is also part of a larger “landscape” plan that includes Aztec West, East, and North and several tri-wall structures. The completion of Aztec East as the last element in this plan was done cumulatively, however, over several decades, rather than in one or a few well-organized, major building episodes, as had been the practice in the florescent period. Elsewhere in the Northern San Juan, Great Houses that had been built in the A.D. 1000s and early 1100s also underwent some remodeling and/or additions coincident with renewed or increased occupation in the A.D. 1200s. At most of these, though, the work resulted in blurring rather than completing the original florescent-period plans, so Aztec East is unusual in this regard. At Aztec West and Salmon Ruin, remodeling in the A.D. 1200s resulted in the subdivision of some large Chacoan rooms and the addition of small Mesa Verde–style kivas, so even the major buildings of the Totah were not immune to this kind of change (see figures 8.3 and 8.4).

Wood use at Aztec East contrasts strongly with that at Aztec West (Brown, Windes, and McKenna 2002). Aztec West shows a pattern typical of the largest, florescent-period Chacoan Great Houses—heavy reliance on large conifers brought from a considerable distance to furnish primary roof construction beams. Even the secondary roof beams are often of aspen brought from distant mountains rather than the closely related cottonwood, which would have been very common in the local floodplain (Tennessen, Blanchette, and Windes 2002). By contrast, at Aztec East, beams dating after A.D. 1140 are almost exclusively juniper, showing a clear shift to local wood sources (Brown, Windes, and McKenna 2002:7). Although Aztec East is as large as some of the major Great Houses of the florescent period, its manner of construction—incremental additions and the use of local building timbers—was much more like the “regular” Northern San Juan pattern than that of the Chaco florescent period.

From Salmon Ruin, R. Adams (1980) reports on 253 cutting dates and probable cutting dates. The majority of these dates represent several large-scale beam-cutting and building episodes from the Primary (Chacoan) occupation—A.D. 1088–1090, A.D. 1093–1094, and A.D. 1105–1106. There is a hiatus in tree-ring dates of any sort between A.D. 1116 and 1186, and a hiatus of cutting dates between A.D. 1116 and 1242 (R. Adams 1980). Researchers also collected archaeomagnetic samples from various contexts at Salmon Ruin, and these show a hiatus of fifty-five years, between about A.D. 1130 and 1185 (R. Adams 1980:223). Examination of data from stratigraphy and ceramics led Adams (1980:230) to question, however, whether abandonment during this period was complete: “The site may, in fact, have been abandoned for the entire 55 years. However, the depositional sequence in several rooms seems to refute the possibility of total site abandonment for such an extended period of time. A more likely possibility, which the deposition and ceramic data seem to support, is that after Chacoan abandonment but prior to the advent of the Mesa Verdean reoccupation, a local San Juan population moved into the Pueblo or were moving in as the Chacoans were moving out.”

On the basis of stylistic continuity in San Juan Whitewares, Franklin (1980:94) also questions whether the site was ever completely abandoned in the A.D. 1100s. Adams’s reference to a “local San Juan
population” apparently is based on Franklin’s identification of a ceramic complex dominated by McElmo Black-on-white instead of Mesa Verde Black-on-white in contexts thought to date to the late A.D. 1100s (Franklin 1980:95). Overall, the evidence from Salmon suggests that occupation in the middle and late A.D. 1100s was light but that a period of complete abandonment cannot be ruled out.

Examination of the tree-ring analysis records from Salmon Ruin (courtesy of Jeffrey Dean at the Laboratory of Tree-Ring Research, University of Arizona) shows shifts in construction wood similar to those noted at the Aztec complex. Wood species used for beams in initial construction in the late A.D. 1000s and early 1100s contrast strongly with post-A.D. 1200 construction wood (with most but not all of the latter dates coming from the reroofing of the Great Kiva in the A.D. 1260s). In the Primary or florescent Chacoan occupation, 308 wood samples having non-vv dates were tabulated. Of these, 25 percent were juniper, 65 percent ponderosa pine, 9 percent fir or Douglas fir, and 1 percent white fir and piñon pine. For the later or Secondary occupation, 83 wood samples yielded post-A.D. 1200 dates (including a few vv dates). Of these, 81 percent were juniper, and 19 percent were fir or Douglas fir. In both building periods, the juniper could have been obtained nearby, because it “grows vigorously and abundantly within a 10 km radius” of Salmon Ruin (K. Adams 1980:494). Douglas fir can grow on sheltered, north-facing canyon walls at quite low elevations, so it could also have come from nearby canyons, although the nearest dense stands are some 80 km away (K. Adams 1980:501). The biggest contrast between the two periods of construction is the predominance of ponderosa pine in the earlier period and its complete absence in the later period. K. Adams (1980:490) notes that ponderosa has been observed 34 km southwest of Salmon but that abundant stands are not available until “one travels over 80 km north and east and reaches the mountains of southwestern Colorado.”

Because reroofing the Great Kiva in the A.D. 1260s would have required large, straight timbers, builders would have preferred beams of either Douglas fir or ponderosa pine. What is striking, however, is that they did not use ponderosa pine at all, despite heavy dependence on it during initial construction of the Salmon Great House more than 150 years earlier. The small number of fir beams recorded for the A.D. 1200s construction could have been acquired close to the site—occasional use of Douglas fir is not uncommon in Pueblo III sites from the Northern San Juan. At Salmon Ruin, systems for organizing and motivating work parties, either from Salmon or from communities located closer to the supply of ponderosa pine, evidently were no longer viable in the 1200s, even though builders had relied upon them during the initial construction phase in the late A.D. 1000s and early 1100s.

Turning to another characteristic of the major, florescent-period Chacoan Great Houses—imports of materials from outside the locality—we see a dramatic reduction in scale and variety of imports at Salmon Ruin after the early A.D. 1100s. The excavators of Salmon Ruin recognized three periods of occupation: Primary, representing initial Chacoan construction and occupation; Intermediate, representing a light occupation in the late 1100s and perhaps early 1200s, dominated by McElmo Black-on-white pottery; and a heavy Secondary occupation in the 1200s, dominated by Mesa Verde Black-on-white. Franklin (1980:186–187) characterizes the changes in ceramics through the Salmon Ruin sequence:

The most obvious trend observed in the qualitative assignments of types and varieties to occupation lies in the difference between the Primary and later periods. Although containing fewer ceramics than the Secondary, the Primary assemblage contains a representation of many more series and types than do the later periods…By contrast, the Intermediate and Secondary occupations are dominated by vast quantities of San Juan ceramics (over 90% of the decorated assemblage). There are very few intrusives in the post-Primary periods…and those are almost entirely from the White Mountain Redware series…. The utility wares also become exclusively San Juan graywares by the Secondary. The considerable amounts of intrusive utility ware from the Chuska and Chaco areas decline, along with the whiteware imports from those regions.

Franklin (1980:187–188) attributed the decline in nonlocal pottery after the Primary occupation to a collapse of the Chacoan trading
network. Comparable quantitative data from Morris's excavations at Aztec West are not available.

Shelley's (1980) analysis of lithic materials from Salmon also shows that frequencies of Narbona Pass chert (previously called "Washington Pass chert") decline dramatically after the Primary occupation. Of the 3,022 Primary-occupation lithic items identified as to source, 279, or 10.8 percent, were of the distinctive Narbona chert that also figures prominently as an import into Chaco Canyon during the florescent period (Cameron 2001). In the Secondary occupation at Salmon, Narbona chert fell to 181 out of 11,486 items, or 1.6 percent. Shelley (1980:53–54) reports that the Secondary occupation occurrences of Narbona chert were concentrated in fallen roof deposits from rooms that also had Primary occupation refuse with high frequencies of Washington Pass (Narbona) chert. This implies that much and perhaps most of the Secondary occupation occurrences of Narbona chert were initially deposited during the Primary occupation.

Shelley (1980:149) also reports thirty-four pieces of turquoise from Mesa Verde (presumably Secondary) contexts at Salmon. It does not appear that the sample includes items left with burials. Surprisingly, the Primary occupation yielded only nine pieces of turquoise (Shelley 1980:52). Numbers of source-identified lithics can provide a rough basis for standardizing these numbers for the purpose of comparison. Turquoise occurrences are equal to about 0.3 percent of the number of lithics in both the Primary and Secondary occupations, indicating no change in relative frequencies. Morris's (1924) report on burials from Aztec West does show that, during the Mesa Verde period (equivalent to the Secondary occupation at Salmon), several burials had associated items of turquoise, olivella, and abalone shell, as well as ornaments likely made of local materials. The quantities of turquoise and shell from Mesa Verde–period burials reported by Morris (1924) appear lower, on average, than at florescent-period burials from Chaco Canyon Great Houses.

In summary, if a Chacoan elite survived in the Totah region after the end of the Chacoan florescent period, its social power appears to have been much diminished and little, if at all, different from that of leaders at other contemporary and equally large communities in the Northern San Juan. After the A.D. 1150s none of the Northern San Juan Great House communities, including Aztec, displayed the indicators of social complexity that were present at the major Chacoan centers during the florescent period. For example, there were no large-scale, planned construction events involving large numbers of rooms at the Aztec complex or at Salmon after the early 1100s. The leaders at the major Totah Great Houses could no longer motivate and organize work parties to bring in large construction beams from a distance. Furthermore, the data from Salmon indicate that the scale of long-distance import of both utilitarian and exotic materials decreased dramatically after the early A.D. 1100s.

Were There Outlying Chacoan Great Houses in the Northern San Juan after the A.D. 1150s?

Most of the Northern San Juan Chaco-style Great Houses built in the late A.D. 1000s and early 1100s continued to be occupied or were reoccupied during the 1200s, and they may well have retained considerable importance in the ceremonial and social life of their associated communities. A tree-ring cutting date of A.D. 1172 indicates that people repaired the Great Kiva at the Lowry Site and evidently used it several generations after its construction (Ahlstrom 1985). On the other hand, the kind of remodeling done at most of these Great Houses is consistent with their conversion to ordinary residential use by multiple households. Although some Great Houses were incorporated into new types of community centers in the 1200s, most became spatially peripheral to these new centers.

It is also important to remember that all Southwestern "Great Houses" are not Chacoan Great Houses. Nucleated settlement patterns with larger-than-ordinary buildings or roomblocks at their center occurred in the San Juan area well before and well after the period of Chacoan florescence. What distinguishes outlying Chacoan Great Houses from other San Juan central structures is that they reference specifically Chacoan architectural styles and layouts, as established at the major centers. Also, Chacoan Great Houses and associated Great Kivas are distinguished by construction that is more formal and that required substantially more investment of labor, compared with surrounding "ordinary" residences. Chacoan Great Houses contrast strongly with surrounding residences, which were usually dispersed.
Neither Aztec West nor Aztec East appears to have served as an architectural model for the community centers constructed in the Northern San Juan area in the late A.D. 1100s through the early 1200s (early Pueblo III period), implying that building a house that ostentatiously referenced one of the major Chacoan centers was no longer a useful strategy for displaying prestige. At this time, Northern San Juan communities consisted predominantly of dispersed small habitations, but some communities had nuclei of multiple residential roomblocks, each containing several contiguous Prudden units. Varying numbers of smaller roomblocks or individual habitation units are widely scattered around the nucleus. Great Kivas are sometimes associated, but civic architecture in general is rare (Lipe and Ortman 2000; Lipe and Varien 1999b; Varien 1999). At some communities, one can dimly perceive a “Great House” section within one of the nuclear roomblocks—that is, a multiple-story section, perhaps with blocked-in kivas but with room sizes and kiva-to-room ratios little if any different from the surrounding architecture.

A good example is the Bass Site complex (figure 8.7) in the Woods Canyon locality of southwestern Colorado (Lipe 1999b; Lipe and Ortman 2000). Here, a residential roomblock with nine kivas includes a two-story section that has three blocked-in kivas and four towers on its periphery. Associated pottery indicates an occupation in the late A.D. 1100s or early 1200s (Lipe and Ortman 2000). Several additional single-story, multiple-habitation roomblocks are nearby. Outside this central complex is a dispersed pattern of one- and two-unit habitations.

In any case, the subtle level of architectural differentiation of the Bass complex “Great House” differs greatly from that displayed by Great Houses of the Chaco florescent period, not only at the main centers but also at the outliers. Overall, the early Pueblo III period community patterns in the central Mesa Verde region contrast with those of the Chaco florescent period. They also do not mimic the architectural pattern of Aztec East, which was constructed largely in Pueblo III but appears to retain the essential characteristics of a Chaco florescent-period Great House. West of the central Mesa Verde area, however, the Chacoan pattern may have continued to prevail. In the San Juan River valley in southeastern Utah, the Bluff Great House, which displays several classic Chaco features, including constructed berms (Cameron 2002), appears to have been built in the late A.D. 1000s or early 1100s but evidently continued to be the central structure in a widely dispersed settlement pattern well into the A.D. 1200s.

In the late Pueblo III period (A.D. 1225–1290), a different type of...
community center developed in the Northern San Juan, coincident with a settlement shift to canyon-oriented locations and, evidently, with the intensification of warfare throughout the region (Lipe 1995; Lipe and Ortman 2000; Ortman et al. 2000). Examples include Sand Canyon Pueblo (figure 8.8) and Seven Towers Pueblo (figure 8.9). Most Chaco-style Great Houses built in the early 1100s became more marginal to the centers of their communities at this time, although many have evidence of continued use. The increasingly aggregated, canyon-oriented villages of the middle and late 1200s display the usual San Juan–pattern habitation units organized around small household kivas. Often, these units are built to conform to irregular canyon topography and/or to adjacent units, so they are not as uniform in layout as earlier examples. In the more tightly aggregated villages, habitation units are adjacent to one another, forming large roomblocks; in others, the

habitations are merely clustered. These villages typically have a precinct with distinctive civic architecture, including a D-shaped, multi-walled building, an informal plaza, a tower complex, and occasionally a Great Kiva and/or a complex of storage rooms not associated with a particular habitation. In addition to defensible locations, the late Pueblo III villages usually have a masonry wall enclosing all or part of the settlement.

These late villages do not appear to have been modeled on the Great Houses at Aztec, including Aztec East, which evidently was completed in the A.D. 1200s (Brown, Windes, and McKenna 2002). The central Mesa Verde villages consist of multiple, single-story masonry roomblocks, rather than one or two massive, multiple-story structures (as at Aztec). Although sites such as Sand Canyon Pueblo (Bradley 1993; Ortman and Bradley 2002) may have followed a very general
plan, they grew by small additions, not as a result of rapidly executed building projects simultaneously involving numerous structures. Furthermore, surface rooms are typically small and low-ceilinged, only locally available building timbers were used, and the masonry construction and architectural details are more variable and much less formal than in the major florescent-period Chacoan Great Houses.

Despite the differences noted above, there are some points of similarity. One can see bilateral spatial organization both at Aztec East (where two massive buildings are set side-by-side fronting a plaza) and in the late Pueblo III canyon-rim villages, which are usually bisected by a drainage or, in a few cases, by a wall (Lipe and Ortman 2000). The circular tri-wall structures associated with some Chacoan Great Houses (for example, the Hubbard Site at Aztec West and a similar structure at Pueblo del Arroyo at Chaco Canyon) could have provided models for the multiwalled, nonresidential structures present at most of the late Pueblo III villages in the central Mesa Verde region. On the basis of associated pottery, Vivian (1959) interpreted the Hubbard tri-wall as dating to the A.D. 1200s, but Lekson (1983b) makes a case that this structure, like the one at Pueblo del Arroyo, was built in the middle or even early A.D. 1100s. The great tower at Yellow Jacket Pueblo (Kuckelman 2003) bears some resemblance to the Hubbard tri-wall and dates to the middle or late A.D. 1200s. The great majority of the late Pueblo III multiple-walled structures in the central Mesa Verde area, however, are not circular tri-walls but are D-shaped bi-walls (Sun Temple at Mesa Verde National Park is probably the best-known example). If these emulate a Chacoan prototype, they do so only in a remote way. To my knowledge, D-shaped bi-walls are not part of the Aztec or Chaco Canyon architectural repertoires.

Pueblo III in the central Mesa Verde region is also characterized by a marked drop (relative to the late Pueblo II period) in the number and relative frequency of artifacts originating outside the region. High-value exotic items such as shell and turquoise disappear almost entirely from assemblages. For example, ten years of excavations by the Crow Canyon Archaeological Center at Pueblo III sites in southwestern Colorado yielded nearly 135,000 corrugated cooking pot sherds, but only 3 items of turquoise, 9 of obsidian, 18 of shell, and 10 of jet. There was little difference in the frequency of these items between the four-hundred-room Sand Canyon Pueblo and the much smaller, nearby sites that were tested (Lipe 2002b). By contrast, in excavations by the Chaco Archaeological Project in Pueblo II contexts at Chaco Canyon, turquoise was more than one hundred times as common relative to sherds than in the southwestern Colorado Pueblo III sites (Lipe 2002b; Phillips 1993). Ceramic wares originating outside the Northern San Juan are also quite rare at sites dating to the A.D. 1200s in the central Mesa Verde region. That this is also true for the post-florescent occupation at Salmon Ruin in the Totah has already been discussed.

The decline in long-distance circulation of both utilitarian and exotic goods in the Northern San Juan is consistent with the inference that regional and interregional exchange networks had broken down. As argued above and elsewhere (Judge 1989), a pilgrimage system tying distant communities to the major centers at Chaco Canyon and Aztec probably facilitated such exchanges during the Chacoan florescent period. The implication is that neither Aztec nor other sites in the Northern San Juan functioned in this way after the early A.D. 1100s.

One other piece of evidence indicates that Aztec is unlikely to have been a primate political center for the Northern San Juan after the period of Chacoan florescence. Between the early A.D. 1100s and the 1200s, the settlement gap between Aztec and the rest of the Northern San Juan greatly widened (Lipe and Varien 1999b). Continuing a trend evident in the Pueblo II period, the Pueblo III Northern San Juan population concentrated in two areas—the Totah region of New Mexico and the central Mesa Verde region (the Mesa Verde/Mancos, Ute, and Monument/McElmo subregions, to use the terminology of Lipe and Varien 1999b). After A.D. 1150 few habitation sites remained in the Piedra drainage, the Colorado portion of the La Plata and Animas drainages, or the easternmost headwaters of the Mancos and McElmo, that is, in the areas north of Aztec. What this means is unclear, but it could indicate that a hostile relationship between the communities of the Totah and those of the central Mesa Verde region led to the formation of a “no-man’s land” north of Aztec. This would be consistent with Kohler and Kramer’s (2003) inference that raiding parties from the Totah might have been capturing women in the central Mesa Verde area in the 1200s (also see Martin 1997).

Overall, the regional structure of Northern San Juan settlement and community patterns in the late A.D. 1100s through 1200s implies that numerous, politically independent, and probably competitive
communities and community clusters existed (Lipe 2002b). This also is consistent with evidence that raiding was regionally endemic at that time. We cannot rule out the formation of large, multicomunity alliances, but there is no evidence that such alliances were strong enough and long-lasting enough to be reflected in architectural and settlement patterns.

In general, the data from the post-florescent period indicate a return to “normal” in the Four Corners region, with relatively low levels of political hierarchy and low levels of regional political and economic integration. This is not to say that people did not remember the Chacoan florescence or that it had no effect on what happened subsequently (Bradley 1996). These effects, however, appear to be primarily the result of Chaco’s role in the region’s cultural history, rather than due to the continuation of a political and ceremonial system that had flourished for nearly a century between A.D. 1040 and 1135.

CONCLUSION

The San Juan pattern of architecture and settlement layout must have symbolized several long-lasting, widely held beliefs about cosmology and the social order. By incorporating elaborated versions of these existing symbols into Great House architecture and community patterns, Chacoan leaders were able to link newly hierarchical and large-scale social formations to beliefs already widely accepted by San Juan populations. Elements of the basic San Juan pattern were maintained in Northern San Juan communities after the collapse of the hierarchical Chacoan system. This pattern—and probably some aspects of community organization linked to it—did not survive the depopulation of the Northern San Juan in the late A.D. 1200s and the widespread rise of plaza-oriented pueblos in northern Rio Grande and Western Pueblo areas in the A.D. 1200s and 1300s.

During the time of Chacoan florescence—from about A.D. 1040 to 1135—the main Chaco Canyon and Totah centers supported an elite ceremonial/political leadership that exercised greater social power than any that preceded or succeeded it in the Pueblo tradition. Evidence includes the organization of large-scale building projects, the importation of quantities of construction beams, pottery, turquoise, maize, and certain lithic materials, and the ostentation of the architectural contrasts between the Great Houses and ordinary residences.

The expansion of Chacoan-style Great Houses into the Northern San Juan was relatively late and short-lived—from about A.D. 1075 to 1130 or 1135. Construction of major Great Houses at Salmon and in the Aztec group probably represents a relocation northward of the major locus of Chacoan power and influence. Smaller Great Houses that clearly referenced Chacoan architectural models were built in many communities in the Northern San Juan during this period.

Outlying Great House communities in the Northern San Juan do not appear to have been politically or economically controlled by the major centers. Rather, the leaders of the outlying communities probably used pilgrimages to Chaco or later to Aztec to acquire status and influence in their own communities. In turn, they mobilized contributions of labor and materials that helped support the social and ceremonial systems operative at the major Great Houses. In the Northern San Juan, the period of Chacoan florescence was a time when pottery and some other goods circulated more widely than both before and later. Most people lived in small habitation units, or clusters of such units, that composed dispersed communities centered on a small Great House and/or other elements of civic architecture. Residential mobility appears to have been high on a local, and perhaps regional, level.

There is little evidence that Chacoan leaders at the major centers used coercive violence to extend their political control or influence into the Northern San Juan hinterland. Several well-documented cases of cannibalism and/or extreme violence from the Northern San Juan occurred in the period A.D. 1130–1160, when the severe mid-1100s drought was setting in and when the regional influence of the main Chacoan centers seems to have dissipated or to have been in steep decline.

After the middle A.D. 1100s most outlying Northern San Juan communities no longer referenced Chacoan models when constructing civic architecture, even though the massive Chacoan-period buildings at Aztec and Salmon continued to be occupied. There, large-scale organized building projects no longer took place, local instead of distantly acquired building timbers were used, and imports of nonlocal pottery and lithic materials declined substantially. Thus, evidence of social hierarchy and control diminished, even at the major Great Houses that continued to be occupied in the Totah region.

In the A.D. 1200s new forms of public architecture and settlement
William D. Lipe

layout spread through the Northern San Juan, making the increasingly aggregated villages of this period even more different from preceding Chacoan models. Although construction of the Aztec East Great House dates largely to the 1200s, it did not serve as a model for the construction of central buildings at outlying communities, as had the earlier major Great Houses. Warfare—probably among multiple communities—also intensified during the A.D. 1200s. The evidence indicates that, during the A.D. 1200s, the Northern San Juan had a multitude of small independent polities, with no primate center of political, ceremonial, or economic influence.

Notes

1. Northern San Juan region and Mesa Verde region refer to the same area and are used interchangeably. Within the Northern San Juan, I refer to the central Mesa Verde region as the area from the Mesa Verde proper to Cottonwood Wash in southeastern Utah. Totah refers to the area that includes the lower Animas and La Plata River valleys and adjacent portions of the San Juan River valley in northwestern New Mexico.

2. Throughout the chapter, San Juan drainage, Northern San Juan, and Southern San Juan refer to hydrologic basins, that is, the areas drained by the San Juan River or by its northern and southern tributaries. In the regional literature, the term San Juan Basin often applies to the San Juan geologic basin, a large area centered in northwestern New Mexico that is defined on the basis of a structural depression in the underlying geologic formations. The San Juan geologic basin is bordered on the north by the San Juan and La Plata mountains of southwestern Colorado, on the west by the Defiance uplifts and the Chuska Mountains, on the south by the Zuni Mountains, and on the east by the Nacimiento Uplift. The southwestern portion of the San Juan geologic basin extends into the Upper Little Colorado drainage, and the southeastern portion extends into the headwaters of the Rio Puerco, which drains into the Rio Grande. Chaco Canyon is located in the central San Juan geologic basin, which is often what is meant by references in the Chacoan literature to "the San Juan Basin."

3. Flannery and Marcus (1976) introduced the term public architecture in reference to facilities associated with public rituals or other activities that promote the social integration of communities or segments of communities. In the Pueblo Southwest, this label often applies to Great Kivas, Great Houses, multiwalled struc-

utes, plazas, and so on. Bradley (1996) has suggested that a more appropriate label for such structures would be civic architecture, because some of the structures referenced were probably not public in the sense of having unrestricted access. In addition, Bradley's term is general enough to include the houses of community leaders, which cross-culturally are often larger or more elaborate than ordinary residences.

4. In addition to the architectural and settlement layout features noted in the text, traits that did not accompany Mesa Verde-region migrants to their new locations include pecked-block "McElmo style" masonry, Mesa Verde mugs and kiva jars, and deer humerus scrapers (Lipe and Lekson 2001).

5. I read the architectural and settlement data to indicate a considerable disjunction between Pueblo III San Juan community organization and that represented by both contemporary and later plaza-oriented pueblos. Ware (2002b) has recently used similar data to argue that deep-rooted continuities linked some aspects of San Juan social organization to Pueblo IV and historic Pueblo forms.

6. The sites that fall into a mid-A.D. 1100s group (as listed in Kuckelman, Lightfoot, and Martin 2000) include 5MT10297 in Aztec Wash, the Cowboy Wash sites, the Grinnell Site, Hanson Pueblo, La Plata 41, Mancos Canyon, Marshview Hamlet, Mesa Verde 499, Rattlesnake Ruin, Yellow Jacket 5MT3, and the Seed Jar Site (5MT3892).

7. In my opinion, many Northern San Juan sites listed as Chaco-era (A.D. 900–1150) Great Houses in the Chaco World database (2004) and in Kantner (2003c) probably postdate A.D. 1150, and some lack clear evidence of Chacoan architectural influences. They may be Great Houses, but are they Chacoan Great Houses?