

CONNECTING WORLDS: PUEBLO III TOWERS IN THE NORTHERN SAN JUAN



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ABSTRACT

The towers of the northern San Juan, including those on Mesa Verde, Hovenweep, and Canyons of the Ancients National Monument, were constructed on mesa tops, in cliff dwellings, along canyon rims, and in canyon bottoms during the Pueblo III period (A.D. 1150–1300)—a time of social and environmental upheaval. Archaeologists have interpreted the towers as defensive strongholds, lookouts, signaling stations, astronomical observatories, storehouses, and ceremonial facilities. Explanations that relate to towers' visibility are most convincing. As highly visible, public buildings, towers had abstract, symbolic meanings as well as concrete, functional uses. We ask not just, "What were towers for?" but "What did towers mean?" One possibility is that towers were meant to encourage social cohesiveness by invoking an imagined, shared Chacoan past. The towers reference some of the same ideas found in Chacoan monumental buildings, including McElmo-style masonry, the concept of verticality, and intervisibility with iconic landforms. Another possibility is that towers symbolized a conduit out of the social and environmental turmoil of the Pueblo III period and into a higher level of the layered universe. We base this interpretation on two lines of evidence. Pueblo oral traditions provide precedent for climbing upwards to higher layers of the world to escape hard times. Towers are always associated with kivas, water, subterranean concavities, or earlier sites—all places that, in Pueblo cosmologies, open to the world below our current plane.

RESUMEN

Las torres del norte del San Juan, inclusive éstos en Mesa Verde, en Hovenweep, y en el monumento nacional de Canyons of the Ancients, fueron construidos en cimas de mesa, en casas en acantilado, por los bordes de cañones, y en fondos de cañones durante Pueblo III (d.C. 1150–1300)—un tiempo de trastorno social y ambiental. Las torres han sido interpretadas por arqueólogos como fortalezas defensivas, miradores, lugares para mandar señales, observatorios astronómicos, almacenes, e instalaciones ceremoniales. Las explicaciones que se relacionan con la visibilidad de las torres son las más convincentes. Como edificios públicos sumamente visibles, las torres tuvieron significados abstractos y simbólicos así como usos concretos y funcionales. Aquí preguntamos, no solamente, "¿Para qué sirvieron las torres?" pero además "¿Qué significan las torres?" Una posibilidad es que las torres intentaban animar la cohesión social invocando un pasado imaginado y compartido

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de Chaco. Las torres sugieren algunas de las mismas ideas encontradas en edificios monumentales de Chaco, inclusive la albañilería del estilo de McElmo, el concepto de la verticalidad, y la intervisibilidad con formas icónicas de la tierra. Otra posibilidad es que las torres simbolizaron un conducto fuera de la agitación social y ambiental de Pueblo III a un nivel más alto de las capas del universo. Basamos esta interpretación en dos líneas de evidencia. Primero, las tradiciones orales de los Pueblos proporcionan el precedente para subir hacia arriba a capas más altas del mundo para escapar tiempos duros. Segundo, las torres siempre son asociadas con kivas, con el agua, con las concavidades subterráneas, o con sitios más tempranos—todos lugares que, en las cosmologías de los Pueblos, abren al mundo abajo de nuestro plano actual.

The enigmatic Pueblo III period (A.D. 1150–1300) towers of the northern San Juan region, including those on Mesa Verde, Hovenweep, and Canyons of the Ancients National Monument, have long attracted archaeological interest (Holmes 1878; Jackson 1878). Some are situated in prominent locations with sweeping vistas, and others are tucked into canyon bottoms. Some are square, some round, and others D-shaped. Some are attached to kivas, some are incorporated into roomblocks, and some stand alone. Over the past century, archaeologists have interpreted the towers as defensive strongholds, lookouts, signaling stations, astronomical observatories, storehouses, and ceremonial facilities. These functions need not have been mutually exclusive, although explanations that relate to towers' visibility are among the most convincing.

Towers were not simply spaces to contain behaviors, however. All architecture embodies ideas about the social world. Unusual, highly visible architecture often intentionally conveys symbolic concepts. Thus, it is important to ask not simply "What were towers for?" but also, "What did towers mean?" Pueblo III builders erected towers during a time of environmental uncertainty and social upheaval. Towers echo ideas found at Chaco two centuries earlier. Builders may have appealed to the memory of Chaco, drawing upon the shared values of a real or imagined common past. Towers also are strongly associated with features that, in Pueblo oral traditions, are places of emergence. In Pueblo cosmology, contemporary people inhabit the latest in a series of layered worlds. Kivas, water, subterranean cavities, and earlier sites—features strongly associated with towers—can all be considered symbolic conduits to the world below. In the storied Pueblo past, when corrupt social practices or ritual neglect led to environmental and social chaos, virtuous ancestors escaped the turmoil by climbing upwards to a new and better world. We suggest that ancient tower builders may have been attempting to escape chaotic Pueblo III circumstances by ascending—symbolically—to the next world.

PUEBLO III TOWERS IN THE NORTHERN SAN JUAN

The northern San Juan region refers to an area north of the San Juan River, situated primarily in southwest Colorado and southeast Utah (Figure 1). The region is roughly bounded by the Abajo Mountains and the Dolores River on the north, the La Plata Mountains on the east, the San Juan River on the south, and Cedar Mesa on the west. Although elevations range from approximately 4,000 feet on the San Juan River to approximately 12,000 feet in the La Plata Mountains, much of the northern San Juan consists of mesas and canyons between 6,000 and 7,000 feet, covered in sage scrubland or pinyon/juniper woodland. Pre-Hispanic peoples lived in the area from Paleoindian times through the end of the Pueblo III period.

With research beginning in the days of Morley and Kidder (1917) and extending through the current work of the Crow Canyon Archaeological Center (e.g., Kuckelman 2007; Varien et al. 2007), the northern San Juan is perhaps one of the best-documented, most intensively studied archaeological regions in the world (see Lipe et al. 1999 for an overview). Most recently, the Village Ecodynamics Project (VEP), an NSF-funded collaborative venture between Washington State University and Crow Canyon Archaeological Center, has collected and ground-truthed survey data for community centers across the area (Glowacki 2006; Kohler et al. 2007; Varien et al. 2007). Tree-ring dates and ceramic seriation have enabled archaeologists to develop a fine-grained picture of regional population ebb and flux (e.g., Ortman et al. 2007; Kohler et al. 2008; Varien et al. 2007).

The Pueblo III period in the northern San Juan was a time and place characterized by social upheaval and environmental stress. In the wake of Chaco's collapse by around A.D. 1150, a massive influx of people moved into the area. Between the late eleventh and the late thirteenth centuries, regional population increased from an estimated 6000–7000 to 12,000–14,000 people (Wilshusen 2002). The Pueblo III period encompassed tremendous climatic variability, with periods when conditions for agriculture were predictable and favorable, and periods when drought and instability were the norm. At A.D. 1130, and again at A.D. 1275, environmental conditions moved relatively abruptly in a negative direction (Van West and Dean 2000). By A.D. 1300, ancient Pueblo people had migrated away from the northern San Juan, settling in other areas of the Southwest, such as the Rio Grande (Lekson and Cameron 1995; Ortman n.d.).

The collapse of Chaco, movements and recombinations of people across the landscape, and climatic instabilities all probably contributed to episodes of violence and warfare during the Pueblo III period (Kohler et al. 2009; Kuckelman 2002; Kuckelman et al. 2002; LeBlanc 1999:192–245; Lightfoot and Kuckelman 2001). Women were mistreated and may have been enslaved at twelfth-century sites in the La Plata Valley (D. Martin et al. 1999). Cases for twelfth-century violence and cannibalism have been made for the Mancos Canyon site 5MTUMR

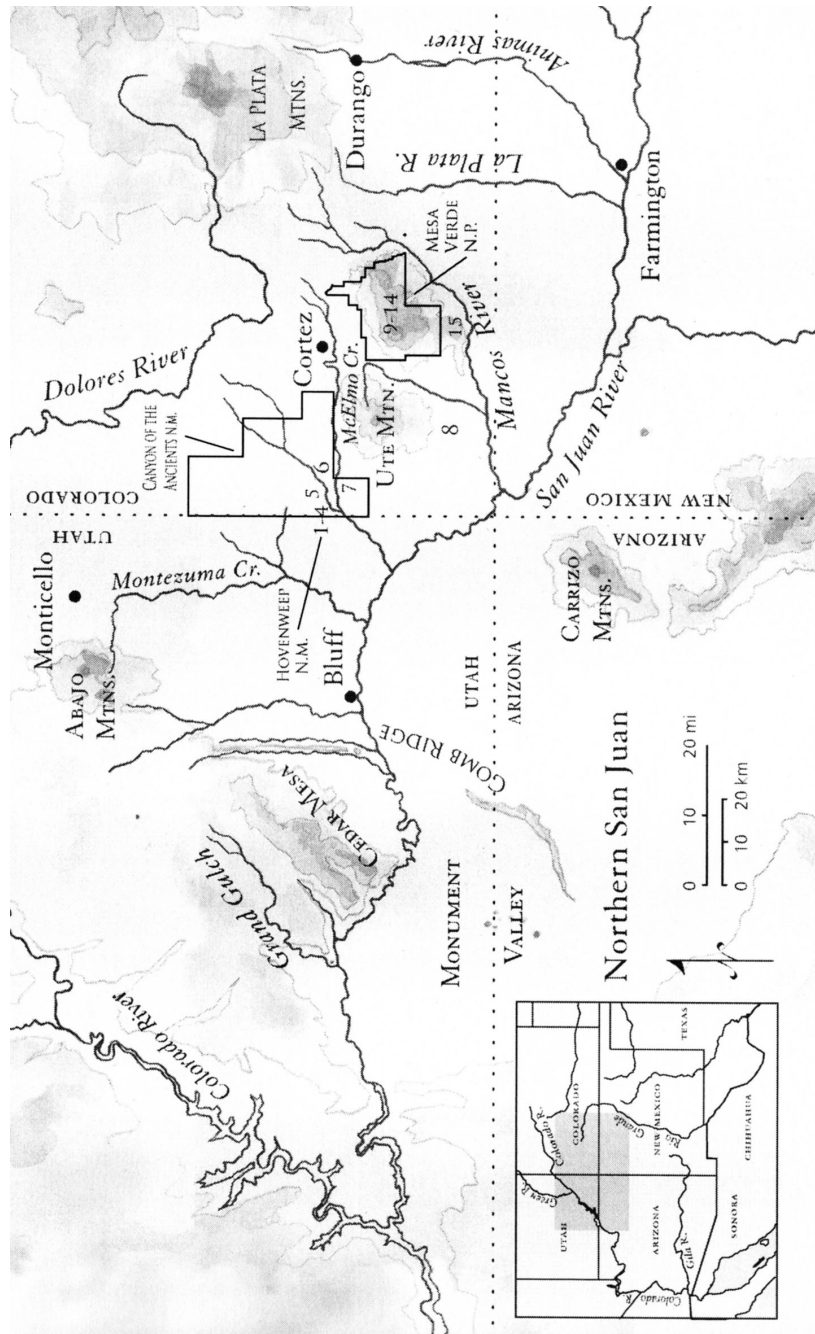


FIGURE 1. The northern San Juan region, and locations of sites discussed in the text. (1) Square Tower group, (2) Holly group, (3) Horse-shoe, (4) Cutthroat Castle, (5) Painted Hand, (6) Lightning Tree, (7) Castle Rock, (8) Cowboy Wash, (9) Mug House, (10) Badger House, (11) Long House, (12) Cedar Tree, (13) Site 16, (14) Sun Point, (15) 5MTUMR2346. Base map drafted by Molly O'Halloran, with modifications by Alison Bredthauer.

2346 (T. White 1992) and Cowboy Wash (Billman et al. 2000). Castle Rock Pueblo was catastrophically destroyed between A.D. 1280 and 1285 (Kuckelman et al. 2002). But even if these were relatively isolated or infrequent events, people were clearly concerned about safety. Late Pueblo III aggregated settlements and cliff dwellings would have optimized defense. Most northern San Juan cliff dwellings date between A.D. 1225 and 1290. And, by the latter half of the thirteenth century, two-thirds of the population had aggregated into large pueblos, often located at the heads of canyons (Varien 1999:148–149; Wilshusen 2002:117–118); Sand Canyon is a classic example (Bradley 1992). It was within this context that ancient Pueblo people constructed the towers that form the subject of this investigation.

Throughout the Pueblo III period, residents of the northern San Juan built masonry towers in cliff alcoves, on canyon rims, on mesa tops, and in canyon bottoms (Glowacki 2006:61, Table 3.5; Lipe and Varien 1999; Lipe and Ortman 2000:110; Schulman 1950). But the towers of the northern San Juan did not appear *de novo*—towers have antecedents and cousins in adjacent areas of the Southwest. The earliest known tower may be the proposed wattle-and-daub structure at the Sacred Ridge site south of Durango, dating to ca. A.D. 800 (Potter and Chuipka 2007). There are early-twelfth-century tower kivas at Chacoan great houses (Marshall et al. 1979:15–18), and towers dating between A.D. 1100 and 1300 in the Largo-Gallina area of northern New Mexico (Mackey and Green 1979). In the northern San Juan, single-storied, round structures appear in unit pueblos in mesa-top contexts by the early Pueblo III period. Late Pueblo III towers are often multistoried, isolated, or integrated towers located at canyon heads and along cliff faces.

Pueblo III builders constructed towers of pecked and ground McElmo-style sandstone blocks, usually stacked as compound or core-and-veneer walls. The towers are typically two to three stories in height, and they can be circular, square, or D-shaped (Fewkes 1919; Winter 1981:29). Winter (1981) developed a useful general classification based on associations with other features. His scheme comprises isolated, integrated, and unit pueblo towers. Isolated towers stand alone on cliff edges or on boulders. Integrated towers are associated with other architectural features such as kivas or room blocks. Unit pueblo towers are features in classic unit pueblos on mesa tops.

Most Pueblo III towers are found atop the mesas and tributary canyon systems north of the San Juan River. Researchers have documented many towers on Mesa Verde National Park, Hovenweep National Monument, and Canyons of the Ancients National Monument (Figure 1). There are more than fifty towers known on Mesa Verde alone (Lancaster et al. 1954). Here, archaeologists have excavated mesa-top towers at Cedar Tree (Fewkes 1921), Sun Point Pueblo (Lancaster and Van Cleave 1954), Site 1235 (Hayes and Lancaster 1975), Site 16 (Lancaster and Pinkley 1954), and Badger House (Hayes and Lancaster 1975). Mesa Verde towers

within cliff dwellings include those at Long House (Cattanach 1980) and Mug House (Rohn 1971:25–26). Perhaps the best-known collection of Pueblo III period towers is within Hovenweep National Monument, a series of discrete parcels comprising 785 acres along the border of southeast Utah and southwest Colorado. Hovenweep towers include the Square Tower group, the Holly group, Horseshoe, Cajon, and Cutthroat Castle. Winter (1977) tested seven of these in the 1970s. Canyons of the Ancients National Monument (CANM) is next door to Hovenweep in southwest Colorado. Covering 164,000 acres of federally managed lands, CANM encompasses the major drainage systems that feed into McElmo Canyon. As part of the VEP survey, Glowacki (2006:61, Table 3.5) tabulated and recorded 57 towers in the McElmo and Monument drainages on CANM and Hovenweep. Diedrichs and Glowacki (2007) have expanded this work to Mesa Verde. Towers are also found atop Comb Ridge and Cedar Mesa in the canyons draining into the San Juan River further to the west in southeast Utah. Bredthauer (2009) recently has recorded 39 towers at 14 sites in southeast Utah.

Colorado College field-school students recently conducted intensive survey, mapping, and in-field artifact analyses at two CANM tower complexes—Painted Hand, on the north side of Hovenweep Canyon, and Lightning Tree, in a tributary to Burro Canyon (Van Dyke and Throgmorton 2006; Van Dyke et al. 2004). The Painted Hand complex contains three boulder-top towers, a small cliff dwelling, rock art and other associated features. The best-preserved tower at Painted Hand stands atop a sandstone boulder with a concavity beneath (Figure 2). A pictograph panel in the concavity includes the image that lends the site its name. The entire site provides a spectacular view to the south, across Hovenweep Canyon towards Sleeping Ute Mountain.

Lightning Tree Tower, by contrast, is sited near the bottom of the colluvial slope within a small unnamed tributary canyon that empties into Burro Canyon. Although there is a dramatic view of Sleeping Ute Mountain from the canyon rim above, the vista from this canyon-bottom tower is limited to the immediately adjacent area. But except for the differences in topographic location, Painted Hand and Lightning Tree Towers are strikingly similar. Both were constructed of McElmo-style, core-and-veneer pecked and shaped sandstone blocks. Both are circular, with basal diameters of approximately 4 m, and partially collapsed remnant walls approximately 4.5 m high. Both are associated with nearby small domestic sites and small cliff dwellings. At each tower, builders constructed a retaining wall to create a level adjacent plaza.

Towers can be described as monumental architecture—architecture constructed by, and for the nondomestic use of, a social group larger than the household. They clearly represent a substantial investment of labor and cooperation. Ancient Pueblo peoples erected towers at both small residential sites and at large community centers (Glowacki 2006:66–67). However, towers are not structures on the scale of Chacoan great houses or aggregated late Pueblo III period pue-



FIGURE 2. Painted Hand tower, on Canyons of the Ancients National Monument. Photo by Ruth Van Dyke.

los. A group of 10–20 people could have built a tower over the course of a few weeks. The construction and use of towers may not have extended further than the local community.

WHAT WERE TOWERS FOR?

Towers intrigue because they are strikingly prominent, unusual buildings, and because they have no immediately apparent purpose. So, most archaeological investigations into towers have focused on the buildings' functions. The towers' high visibility—in terms of both seeing and being seen—figures prominently in many of these explanations. Proposed functions have included defense, signaling, astronomical observation, agricultural storage, and ceremonialism.

Given the growing body of archaeological evidence for violence during the Pueblo III period, it is not unreasonable to assume that defense may have been one of the tower builders' concerns. Towers, with their superficial resemblances to medieval European battlements, evoked images of fortifications or guardposts in the minds of early researchers (Holmes 1878; Jackson 1878; Lancaster et al. 1954;

Riley 1950; Schulman 1950). Inaccessible towers on isolated boulders or canyon rims certainly could have posed challenges for would-be attackers. Some towers contain slits in the walls that provide protected views of approaching trails. Lancaster and Van Cleave (1954:44; see also Wilcox and Haas 1994:218) postulated that the tower at Site 16 on Mesa Verde was built to provide residents with a warning system in the event of an attack. The idea was that a guard posted in the tower would have raised the alarm, and the tunnel connecting the tower to the kiva would have given residents access to a defensible position.

However, there are problems with seeing all towers as primarily guard posts or defensive fortifications. Towers set low in the canyon, such as Lightning Tree on CANM, or Cutthroat Castle at Hovenweep, are in a poor tactical position to serve in a guard capacity. A person in the top of a tower on a high place could keep watch over a large area, but both towers and kivas would have been death traps in the event of actual warfare. Attackers could have easily waited out or burned out defenders holed up inside the tower/kiva complex. If attackers had set fire to the tower or an adjacent structure, people inside would have had little chance of survival, as they would have succumbed to the smoke and heat. At Castle Rock, the remains of people who died violent deaths in some towers suggest the buildings may have indeed been used as strongholds during an attack (Kuckelman 2002). But if the Castle Rock towers were meant to serve primarily as defensive structures, the human remains inside suggest that they were not particularly effective.

Johnson (2003) investigated a possible guard function for towers using a subset of the VEP data—13 towers from the northeast part of Cajon Mesa in the Monument-McElmo drainage. Using GIS viewshed analyses, Johnson examined intervisibility between the 13 towers and surrounding potential farmland. He determined that the towers are visible from the most suitable nearby land for dry farming, and vice versa. Johnson concluded that ancient Pueblo people built the towers to monitor and guard adjacent agricultural lands. On the basis of the height of the well-preserved Square Tower at Hovenweep, Johnson assumed an original height of 7 m for each tower (Johnson 2003:331). However, the blanket 7 m height estimate may be overly optimistic, as standing and collapsed masonry indicates many towers were only two stories high, and stories are unlikely to have exceeded 2.5 m in height.¹

Winter (1981:31–32) considered some Hovenweep towers to be for agricultural storage. He based this interpretation on the fact that excavated towers at Hovenweep lacked floor features but contained corn, manos, and metates. However, the presence of corn, manos, and metates could just as easily suggest ceremonialism. Ground stone artifacts are the only items found consistently in stone circles at Chaco—a feature indisputably related to visibility and ceremonialism (Windes 1978). Furthermore, towers require more labor to build but offer no functional advantage over in-pueblo storage rooms. Towers would have worked

against the desires of farmers potentially concerned with protecting their harvests, because the highly visible buildings would have drawn attention to the location of the stores. During this same period, we see some security-conscious Pueblo III farmers following the more effective strategy of secreting caches of corn in granaries in relatively inaccessible, low-visibility locations in cliff dwellings and high on canyon walls.

Groups of intervisible towers may have facilitated communication between communities, especially important during times of conflict. Wilcox and Haas (1994:217) argue that tower intervisibility connotes political alliances between pueblos. Ellis (1991) postulated a signaling system linking Hovenweep drainage towers that extends collectively over at least 375 miles. Her ethnographic research suggested the main methods of signaling might have been by smoke, fire, or mirror. Selenite, or blue sky stone, is used in ethnographic contexts to reflect light from one tower to another (Ellis 1991:61). But towers in canyon bottoms with limited viewsheds could not have been part of these networks.

Williamson (1978; Williamson et al. 1977:85) has proposed that towers were astronomical observatories, positioned to mark equinoxes and solstices. He found solar alignments in three rooms at Hovenweep, including one attached to a kiva. Clearly the farmers of the northern San Juan were aware of the movements of the sun—important for planting, harvesting, and other agricultural activities—and they marked these movements in various ways. For example, a petroglyph under a sandstone overhang in the Holly group is bisected by sunlight at sunrise on the autumnal equinox. But not all towers have solar alignments, and residents need not have constructed towers if their sole purpose was to track celestial bodies—they could have kept tabs on solar movements using much simpler methods (e.g., petroglyphs, upright slabs or sticks, horizon markers, or alignments of domestic buildings).

For many small-scale farmers, a successful harvest not only entails careful planning of agricultural activities, but also careful timing of rituals and ceremonies to ensure rainfall or other kinds of supernatural aid. Some archaeologists have correspondingly suggested that towers served a ceremonial function. Fewkes (1919:219) pointed out resemblances between towers and kivas. Although Pueblo III period kivas may not have been exclusively for ceremonialism, they are generally considered to be spaces where ritual activities took place. Cedar Tree Tower on Mesa Verde has a sipapu, a feature commonly found in kivas (Fewkes 1921:94). The tower at Site 1235 on Mesa Verde has a southern recess, a feature that appears frequently in kivas (Hayes and Lancaster 1975:96). Some towers contain objects often found in kivas. For example, the south room at Holly House contained a kiva jar, and a corrugated jar that held a mixture of bird, reptile, amphibian, and mammal bones; Rohn (1971:145) found a similar assemblage at Mug House on Mesa Verde. At both Painted Hand and Lightning Tree towers, we found a carefully leveled, small adjacent plaza that could feasibly have been used for gatherings or

dances. These associations suggest that towers may be part of a complex of spaces used for ceremonialism.

No single functional explanation fits all of the northern San Juan towers, but these interpretations need not be mutually exclusive categories. Lancaster and Pinkley (1954:44) contended that towers were built originally for defense, and used secondarily for ceremony. Rohn (1971:86) made the reverse case, arguing that towers' frequent association with kivas points to their ceremonial use, but that the buildings were used secondarily for defense. Grinding stones, manos, and metates led Winter (1981:33) to associate towers with agricultural activities, but he also considered several Hovenweep towers to have had ceremonial purposes. We see no reason why towers could not have been used for multiple practical purposes, although we consider agricultural storage to be the least convincing of the potential tower functions suggested in the literature. Towers clearly were used (unsuccessfully) as strongholds upon occasion, but we do not think they were built primarily to serve as defensive fortifications. Most towers provided intervisibility with many features across the landscape—landforms, other towers, other people, agricultural fields, and celestial alignments—and this high visibility seems to be an important key to understanding their construction.

Part of the reason archaeologists have had such a difficult time understanding towers is that our analyses have been focused on assigning a single practical function to the buildings. But functional explanations tend to reify broad types at the expense of local processes and human agency. When we view buildings as empty containers for action, rather than as interactive material dimensions of social life, we miss the opportunity to think about the ideas and symbols that were in play for those who built and viewed and used these structures. We need to ask not just "What were towers for?" but "What did towers mean?"

WHAT DID TOWERS MEAN?

Most contemporary archaeologists recognize that architecture and landscape constitute reflexive elements of the social world (e.g., R. Bradley 1998; David and Thomas 2008; Ferguson and Chanthaphonh 2006; Johnson 2007; Knapp and Ashmore 1999; Smith 2003). Following the work of Lefebvre (1991) and Soja (1996), architecture is but one dimension—the material dimension—of spatial experience. Buildings and spaces both create and reflect ideas about peoples and their societies, worldviews and ideologies. Architecture symbolizes concepts, evokes associations, and elicits emotions. Spaces are experienced through the body—they are seen, heard, and otherwise sensed (Cummings and Whittle 2004; Ingold 1993; Thomas 1996, 2004; Tilley 1994). Because being in the world is reflexive, and because architecture is part of the material expression of the social, it is possible for archaeologists to use architecture to access elements of the builders' beliefs, ideas, and worldviews. In the Pueblo Southwest, oral traditions, ethnographic,

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and ethnohistoric information also provide insights into the meanings and symbolism conveyed by architecture from archaeological contexts (see for example Ortman 2000; Ortman and Bradley 2002; Snead 2006, 2008; Van Dyke 2007).

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Although northern San Juan towers do not directly replicate Chacoan architectural forms, they seem to reference some of the same ideas that are found in Chacoan monumental buildings. The people of the northern San Juan included descendants of people who had participated at Chaco, so this is not surprising. During the socially turbulent Pueblo III period, a real or imagined shared Chacoan past could have been a point of commonality (Van Dyke 2009; see also B. Bradley 1996). Northern San Juan towers and some early-twelfth-century Chacoan structures share the use of McElmo-style masonry, the concept of verticality, and intervisibility with iconic landforms.

The McElmo masonry style employed by tower builders characterizes many Pueblo III period buildings in the northern San Juan region. The origin, spread, and significance of McElmo-style masonry remain poorly understood, despite over half a century of investigation. Builders in Chaco Canyon during the early 1100s used McElmo-style masonry at great houses such as New Alto, Casa Chiquita, and Kin Kletso (Vivian and Mathews 1965). Builders used McElmo masonry in post-1100 construction at northern Chaco outliers such as Aztec (Brown et al. 2008; McKenna and Toll 1992; Morris 1919, 1928; Stein and McKenna 1988). Researchers have long debated whether McElmo masonry originated in Chaco and spread north, or (as the name suggests) represents an idea brought to Chaco from the McElmo drainage (see Lekson 1986:267–269; Van Dyke 2004; Vivian and Mathews 1965).

The use of McElmo-style masonry in the northern San Juan extends well beyond towers, but some other aspects of these vertical structures also reference Chacoan ideas. The siting of some towers suggests that builders were concerned with the visibility of iconic peaks. For example, towers along canyon rims and in other high places on CANM and Hovenweep provide spectacular views of Sleeping Ute Mountain, an easily recognizable, highly visible landform in the northern San Juan. Two centuries earlier, Chacoans situated shrines, stone circles, great houses and other structures to see San Juan Basin high places such as Huerfano Mountain, Mount Taylor, and Hosta Butte. These similarities may indicate a common concern with seeing iconic peaks, or they may represent an attempt to visually link the northern San Juan across space and time back to the San Juan Basin. Sleeping Ute Mountain is not visible from Chaco Canyon, but it can be seen from Chacoan outliers along the western flanks of the Chuska Mountains, and these sites in turn are linked through lines-of-sight to Chaco Canyon (Van Dyke n.d.). Towers in high places could have symbolized a visual link to the more stable social and ritual world of the Chacoan past.

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Much Chacoan monumental architecture juxtaposes celestial and subterranean elements, with a center place balanced between them (Van Dyke 2007).

This idea is found in the construction of great kivas in great house plazas, in the placement of elevated kivas within great houses at sites such as Chetro Ketl and Salmon Ruin, and in the construction of tower kivas at the outliers of Kin Ya'a and Kin Klizhin. Chacoan tower kivas consist of a series of three or four kivas stacked on top of one another (Marshall et al. 1979:18). Tower kivas may have symbolically balanced up and down, light and dark, sky and underworld. Fewkes (1917:14–15) observed that these layered Chacoan tower kivas evoke the vertically layered worlds of Pueblo origin stories (Marshall et al. 1979:204).

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The concept of a layered cosmos is deeply entrenched in contemporary Pueblo thought, appearing in facets of cosmological, social, religious, and political organization (e.g. Ortiz 1969). Pueblo origin stories differ in their specifics, but they share a theme of emergence through a series of successive underworlds into this, the present world. In the Eastern Keres tradition, for example, the people were crowded into a dark underworld until a boy was sent out to find the sun and to place it in the eastern sky of the fourth world. The people emerged into this higher world, set up clans, and went south (Parsons 1929:242–243; L. White 1942:177; 1960:89). The San Juan Tewa version of the emergence is similar. People living in lower worlds were not quite human yet. Successive peoples emerged from a lake and learned the directions. They could not move at first, however, because the ground was still soft (Parsons 1929:249–253). In Isleta Tiwa stories, people were living in the underworld and a series of different people went up to explore (Parsons 1929:255–260). In the Acoma story, two sisters lived in an underworld place. To progress through the four underworlds, they had to plant four different trees and finally emerged into the present world (Stirling 1942:18–19). Chacoan tower kivas, with their stacked levels, may be meant to symbolize some ancient version of these stories.

Although some northern San Juan towers are superficially similar to tower kivas, they lack interior kiva features and stacked floors. In these Pueblo III period towers, the critical concept may be that of an opening between worlds, or a conduit across space and time. If the Pueblo III period inhabitants of the northern San Juan held a cosmological vision of a layered universe, perhaps they built the towers of the northern San Juan to serve as a symbolic or metaphysical conduit to a higher, pristine world.

We construct this interpretation by weaving together several lines of evidence. First, life was increasingly difficult during the thirteenth century, and Pueblo oral traditions provide precedent for climbing upwards to escape hard times. In Pueblo stories about the past, people repeatedly climbed upwards to successively higher worlds to escape witchcraft, sloth, gambling, and other forms of bad social behavior, with their attendant environmental consequences. For example, according to a Hopi oral tradition, the people in the third world were corrupt. The young people would not listen to their elders, wives would not listen to husbands, and people were killing, fighting, and casting spells to cause sick-

ness. The men and the women separated into different groups on opposite sides of the river. The women's crops began to fail, and they began to ask the men for food. A flood began to threaten the world. The women built towers to reach the sky, but the towers fell down. The men grew reeds that grew through the sky, and the Hopi eventually emerged through the hole into this, the fourth world. People emerged on the still soft and muddy world, then put up the stars, the moon, and the sun (Parsons 1929:236–238).

Second, Pueblo oral traditions tell us that openings between worlds are associated with kivas, water, concavities, or earlier dwellings; and all towers exhibit one or more of these associations. The place of emergence, the Hopi *sipapu* or the Keresan *shipap*, may be represented on the landscape by a canyon, or some other round and deep place. Kivas—circular, womblike, semi-subterranean spaces—represent sites of connection between layered worlds. A small hole or jar set into a kiva floor, also termed the sipapu, symbolizes the place of emergence from earlier worlds into this one, linking the present world to past mythic events (Smith 1972). In many Pueblo traditions, bodies of water—particularly springs and seeps—are also associated with openings to the underworld (see Snead 2006:213–214 for a review). For example, the Zuni “Dance Hall of the Dead” is beneath a lake (Cushing 1920:88). Bodies of water are home to otherworldly beings such as water serpents (Harrington 1916:201; Lomatuway'ma et al. 1993:18). Tewa ancestors emerged through a lake (Parsons 1926:9), and similar bodies of water symbolize the emergence place (Ortiz 1969). In the Isleta emergence story, a girl discovered a spring, and in it she met a young man from the underworld. The elders decided that she belonged with him in the underworld, and they took her to the spring to offer her to him (Parsons 1929:258–260). Snead (2006) believes the water/emergence relationship is present symbolically at sites in the northern Rio Grande. Some northern Rio Grande reservoirs are not ideally situated to catch or hold domestic water; rather, Snead argues, they may have metaphorically referenced places of emergence or openings to other worlds.

Northern San Juan towers are consistently and closely associated with one or more features that suggest openings to other layered worlds—kivas, water, boulder concavities, or earlier sites. Many towers have close relationships with kivas, as evidenced by tunnels, superposition, architectural similarities, or other connections. We have already discussed some of the kiva-like features and artifacts found in towers. Excavated mesa-top towers in unit pueblos are commonly found to be connected to kivas via subterranean tunnels. All but six Mesa Verde towers investigated by Lancaster et al. (1954) are “adjacent to or very near kivas” (Hayes and Lancaster 1975:96), and fifteen have tunnels connecting them to kivas (Hayes and Lancaster 1975:94). Cedar Tree Tower on Mesa Verde is an exceptional example (Figure 3). Builders situated the tower atop a sandstone outcrop, and a fissure in the sandstone led to a forking tunnel. One branch of the tunnel connected with a subterranean room, and the other led to a kiva. There is

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FIGURE 3. Cedar Tree tower, with tunnels to kiva and roomblock, in Mesa Verde National Park. Photo by Ruth Van Dyke.

a sipapu in the tower, but not in the kiva (Fewkes 1921:89–94). Sun Point Pueblo was Lancaster and Van Cleave's (1954) type site for the kiva/tower complex. Here, a tunnel connects a tower to a kiva, and an exterior doorway runs above ground directly over the tunnel. At Badger House, a tower is linked to a kiva by a 12.5 m-long tunnel (Hayes and Lancaster 1975:93–95). P. Martin (1939) found seven towers atop Cajon Mesa to be linked by tunnels to kivas.

Tower/kiva tunnels may represent a version of the sipapu, with the kiva representing the world below, and the tower representing the world above. Recall that when the San Juan Tewa emerged from the world below, the ground was still soft (Parsons 1929:249–253). At Twin Tower at Hovenweep, the northwest room of the west tower has human footprints molded into the plaster floor—a feature reminiscent of the muddy footprints left by Puebloans emerging from the underworld onto the “unripe” or soft earth (Winter 1977:211). According to Pueblo emergence stories, people living in lower worlds were not yet fully human. At Horseshoe Tower, another boulder-top tower on the Hovenweep drainage, four-toed humanoid footprints are pecked into the bedrock along the tower's north face (Figure 4).



FIGURE 4. Pecked, four-toed footprints next to the Horseshoe tower, a boulder-top tower on Hovenweep National Monument. Photo by Ruth Van Dyke.

Towers in cliff dwellings do not tend to be linked to kivas via tunnels, but they do tend to be associated with kivas. For example, the north wall of Room 60, the tower at Long House on Mesa Verde, extends over the south wall of Kiva Q. Room 93 is connected to the southern recess of the kiva and extends under the tower (Cattanch 1980:411, 415). At Mug House, the door to the north tower opens directly onto the roof of Kiva G (Rohn 1971:86). The construction details in Mug House towers are similar to those found in the kivas, and dissimilar to those used for domestic structures (Rohn 1971:48, 86).

Isolated and integrated towers exhibit close associations with water. Like most large Pueblo III period sites, these towers tend to be located atop major springs and seeps (Lipe and Ortman 2000:107). Most of the towers at Hovenweep exhibit this type of association. For example, Boulder House in the Holly group is next to a seep. Horseshoe Tower is on a sandstone point above a seep. Square Tower is on a boulder, adjacent to a kiva, over a seep. The association with water holds even when these towers are not directly over springs. For example, Lightning

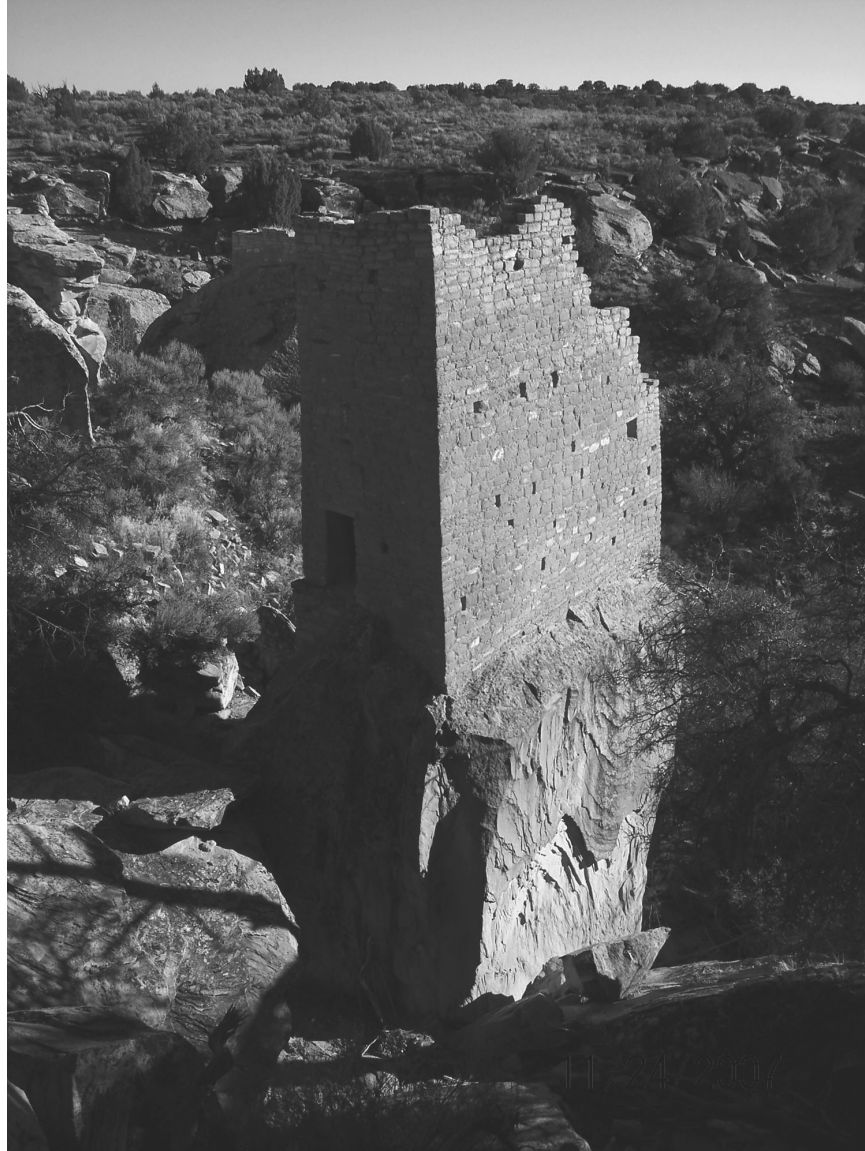


FIGURE 5. Boulder House, in the Holly group on Hovenweep National Monument. Photo by Ruth Van Dyke.

Tree Tower, in a tributary canyon bottom, is near several major water catchment features.

Isolated and integrated towers are also frequently associated with boulders, especially those with openings or concavities underneath. The primary tower at Painted Hand is an excellent example; here, a collapsed tower sits atop a boulder with a subterranean passageway beneath (Figure 2). Many Hovenweep towers are built atop boulders with concavities beneath; Boulder House in the Holly group is one example (Figure 5). At Cutthroat Castle, there is a kiva atop a boulder, surrounded by a room; the only access into the room is by means of a split in the boulder from below.

Still other towers are superimposed atop older sites (Rohn 1977:10, 121), suggesting builders may have been deliberately constructing an association with ancestors, or attempting to access the worlds of the past. Site 1235 at Mesa Verde has a chimney in the floor leading to an older pueblo (Hayes and Lancaster 1975:96). The Badger House Tower, dated to A.D. 1258, is situated atop an earlier adobe structure (Hayes and Lancaster 1975:93–95). Tower C at Site 16 is built atop two kivas from previous occupations, and Tower B rests on the site of an older unit pueblo (Lancaster and Pinkley 1954).

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Towers that are linked to kivas, next to water, built atop hollow boulders, or superimposed on earlier sites all are associated with symbolic openings to the underworld. If late Pueblo III peoples were attempting to construct a conduit to a higher world, it would be logical to place this feature atop openings to the world below. Perhaps Pueblo III peoples believed their world had slipped out of balance due to ritual neglect or the evil deeds of others. In this time of violence, social unrest and environmental uncertainty, people may have constructed towers on or near these symbolic portals in an attempt to facilitate passage towards a higher, uncorrupted world. Towers could have been focal points for ceremonies meant to bring about passage to this new world through social and environmental transformation, and they could have been symbolic attempts to invoke such transformation through supernatural means.

SUMMARY AND CONCLUSION

The Pueblo III period inhabitants of the northern San Juan built towers within unit pueblos, integrated into domestic settlements, and isolated atop boulders on mesa tops, in cliff dwellings, along canyon rims, and in canyon bottoms. Many towers are situated within the bounds of Mesa Verde National Park, on Hovenweep National Monument, and on Canyons of the Ancients National Monument. Functional explanations for towers include defense, communication, astronomical observation, agricultural storage, and ceremonialism. Towers are unusual buildings that often seem constructed expressly to see and be seen. We suggest

that in addition to some or all of these uses, towers probably held great symbolic significance for their builders.

Although much has clearly changed across seven centuries, Pueblo origin stories and cosmologies likely contain threads that extend back in time, referencing beliefs, worldviews, and ideas of the Pueblo past. We cannot know the specific nature of ancient Pueblo beliefs or ideas, but architecture and landscape contain clues as to how people thought about and experienced their spatial and social worlds. Northern San Juan towers invoke ideas such as verticality and visibility that are also strongly expressed in Chacoan architecture. There may have been a sense in which towers symbolized shared Chacoan values, or a shared Chacoan past—whether real, or imagined. During a time of social turmoil, the idea of common origins or values would have been attractive for its cohesive and ameliorative power. Northern San Juan towers also seem to be deliberately and consistently associated with features that, for contemporary Pueblo peoples, signify openings between layered worlds. Linked to kivas, springs, boulder concavities, and earlier sites, the towers of the northern San Juan may represent a vertical conduit across space and time, reaching back into the lower world of the past, through the world of the present, into a future world above. Perhaps tower builders were attempting to facilitate movement out of the social and environmental chaos of the Pueblo III period and into a new pristine level of the world.

These interpretive ideas are not testable in an empirical sense. However, it is our contention that if we as tower researchers limit ourselves to positivist analyses, we will never have more than a small part of the story. Our interpretations fit with the data as we understand them, but other interpretations may fit as well. We hope that, as work on towers in the northern San Juan continues, researchers will take care to contemplate and systematically record such characteristics as: lines of intervisibility between towers and topographic high places; relationships between towers and water, kivas, boulder concavities, and earlier sites; and relationships with associated petroglyphs. By building a tower database that crosscuts state lines, research institutions, and federal agencies, we will be in a better position to evaluate whether some of the ideas we have presented here will hold, or whether others will emerge.

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NOTE

1. The tallest ceiling in Mug House is 2.13 m (Rohn 1971:43). In Long House, the one intact ceiling is 1.79 m above floor level (Cattanach 1980:9). In Chaco Canyon, great-house room ceilings are 2.33–2.53 m in height (Lekson 1986:41–43).

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