How Great Were Cedar Mesa Great House Communities?

Natalie Fast
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Washington State University
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Introduction

The Northern San Juan region in the southwestern United States has been extensively surveyed and many great houses and their associated communities have been identified. The defining Chacoan great houses lie in Chaco Canyon in northwestern New Mexico, in the San Juan Basin. Between A.D. 850 and 1150, at least 18 of these great houses were constructed in Chaco Canyon (Mahoney and Kantner 2000:1). These structures were likely community centers used for ritual, political, or social purposes (see Lekson 2006). Surrounding areas seem to have emulated this style—many outlier great houses and their associated communities extend south, west, and north of Chaco Canyon, including into the Northern San Juan region. The San Juan River bounds the south and the Piedra River bounds the east of this region (Figure 1). The Northern San Juan region includes Mesa Verde and extends into southeast Utah.

On Cedar Mesa in southeast Utah, in the western margin of the Northern San Juan region, relatively little is known about great house community settlement patterns. Two likely “Chaco-esque” great houses have been identified on Cedar Mesa—the Et Al and Owen Severance sites—but we know little about any potentially associated communities. This paper reviews five potentially analogous Pueblo II and Pueblo III great house communities in the Northern San Juan, and includes an example from the Cibola region, in order to understand the range of variation for great house communities. Then, drawing from previous survey on Cedar Mesa, I make tentative estimates for the number of sites we might expect to be part of associated communities. An idea about the density of the Et Al and Owen communities, coupled with
research from other Northern San Juan communities, allows some preliminary suggestions for the social implications of the settlement patterns we might find on Cedar Mesa. Moreover, hypotheses generated from this paper will guide the planned survey for the Et Al and Owen communities this summer.

Defining Communities

In order to understand the settlement patterns and communities of the Northern San Juan basin and those associated with the Cedar Mesa great houses, we must first establish working definitions for settlement pattern and community (or Chacoan community). John Kantner (2008:43) views settlement pattern analysis as concentrating narrowly on quantifiable spatial relationships among material remains. Spatiality is important in identifying communities, and here I use the term settlement pattern as the material record of the built environment in space and time.

As Dennis Gilpin (2003:173) notes, Chaco archaeologists have assessed “the community concept as an interpretation of the settlement patterns observed on the ground.” This study will do the same, but recognizes the problems in assessing communities in such a way. Cedar Mesa, and the Four Corners area in general, is scattered with archaeological sites. Fortunately, as Mark Varien (1999:147) notes, “small residences form larger clusters, with relatively empty areas between clusters” in the northern Southwest, allowing for clearer definitions of boundaries. But how might we define communities without clear boundedness? As Nancy Mahoney and John Kantner (2000:14) note, archaeologists have failed to make a concerted effort to look for Chacoan boundary maintenance. How far do communities extend from a central great house (see Gilpin and Purcell 2000)? Are great house communities the settlements associated with one
great house, or do communities extend to multiple, interacting great houses? Finally, how well integrated were great house communities?

Jason Yaeger and Marcello Canuto (2000) provide a brief synthesis of theoretical perspectives of the community. They write that structural-functionalist approaches focus on the functions that a community serves within a social structure. This viewpoint assumes the existence of community integration. Historical-developmental approaches began as a reaction to structural-functionalism, emphasizing how communities come into existence and how external and historical conditions influence a community’s internal structure. Ideational approaches focus on the concept of identity, seeking an understanding of community that accounts for how people perceive of themselves and their place in community. Finally, Yaeger and Canuto note interactional approaches, which use practice or agent-oriented methods to ask how people create and maintain communities through relationships (Yaeger and Canuto 2000:2-3).

Following Adler (2002), Kintigh (2003), Lipe (1970), Mahoney (2000), and Varien (1999), I choose to use Murdock’s (1949) and Murdock and Wilson’s (1972) structural-functionalist definition of community as a group of people who lived in close enough proximity that individuals would (or could) come into face-to-face contact with each other on a regular, and possibly daily, basis. I use this definition because this study does not focus on how potential communities on Cedar Mesa came into being, nor does it use agent-oriented methodology. Rather, the term community is conceived of as the spatial patterning of settlements whose proximity would indicate interaction between households and a particular community center (a great house). This is similar to Michael Adler’s (2002:28) definition of community that accounts for “spatialization,” meaning that social interaction and shared identity occurred within a relatively localized spatial scale, yet recognizes that “spatial distance between households is not
necessarily equivalent to social distance.” As Yaeger and Canuto (2000:3) remark, this structural-functionalist definition “includes several archaeologically visible material markers: discrete spatial patterning of activities, residential nucleation, and shared material culture” (emphasis added). This definition also recognizes the social processes inferred by spatial clustering (as indicated by Murdock’s emphasis on face-to-face interaction). Finally, when defining community, Mahoney (2000:20) distinguishes between residential and sustainable communities. This paper will examine both types of communities when examining the social implications of settlement types.

Ideational approaches are important in understanding the Cedar Mesa communities as well. Michael Kolb and James Snead (1997:611) define communities as made up of three elements: social reproduction, subsistence production, and self-identification and social recognition by members. In their view, “a community possesses a minimum demographic component comprised of a core of individuals who interact regularly and whose repeated interactions socially reproduce that group” (Kolb and Snead 1997:611). The subsistence production element encompasses subsistence labor, access to resources, land tenure, and general economic aspects. Lastly, the self-identification and social recognition element recognizes physical and symbolic boundaries and a sense of membership linked to residence and subsistence. Taken together, Kolb and Snead argue that these elements create a sense of “place” linked to community identity. Therefore, in their view, community is spatially defined and incorporates social reproduction, subsistence production, and self-identification; community is both structural and ideological.

**Defining Chacoan Great House Communities**
Thus far I have provided a definition for communities on a broader scale. This section examines concepts of Chacoan great house communities in particular. Dennis Gilpin (2003:175) reviews definitions of “community” used in relation to Chaco, concluding that most Chacoan researchers define the Chacoan community as “the cluster of small houses around a great house and great kiva.” Using a sample of Chacoan site clusters, Gilpin assesses them in terms of cluster sizes, density, population, boundedness, organization, date, duration, histories, interaction, and ranking. Based on this sample, Gilpin determines that boundaries, settlement organization, and size vary. However, each Chacoan cluster followed three general patterns of development:

(1) A pre-Chaco great kiva was established within an existing site cluster, and then a great house (with or without a great kiva) was established there later; (2) a great house (with or without a great kiva) was established within an existing site cluster that had not previously contained an integrative structure; and (3) a great house (with or without a great kiva) and the surrounding small houses were constructed together over a few decades (Gilpin 2003:199).

Mahoney and Kantner (2000:12) write that southwestern archaeologists usually approach the Chacoan community as a “spatial distribution of recognizable residential sites; communities are defined as relatively dense clusters of habitations surrounded by zones containing few or no sites.” They also note that communities may have integrated habitations located some distance away from great houses, as shown by Gilpin and Purcell (2000:33-34). Following a spatial recognition of great house communities, Mahoney (2000) examines communities in terms of residential and sustainable units. She defines residential communities as spatially distinct clusters or residences and sustainable communities as the spatial and demographic scale of a social network needed to maintain residential communities (2000:20). In other words, residential communities operate within sustainable communities. Mahoney (2000:20) follows Varien’s (1999:154) two-kilometer radius (or approximately 13 km² area) for the spatial limit of
residential communities and estimates that a minimum of 475 people would be necessary to maintain a demographically stable social unit (sustainable community). Using survey information from four great house communities, Mahoney (2000:25-26) finds that residential communities surrounding great houses contained fairly small populations. Therefore, larger, sustainable communities would have been essential to community maintenance. This Cedar Mesa study focuses primarily on residential communities. However, teasing out the social implications of communities on Cedar Mesa requires an understanding of sustainable communities.

**Background**

Extensive sampling surveys were carried out in the central part of Cedar Mesa in the 1970s (Matson et al. 1988, 1990), but the two Chacoan-style great houses were not discovered at that time. Survey on Cedar Mesa has been sporadic since then, largely confined to checking small areas where federal or private-sector development required assessment under Section 106 of the National Historic Preservation Act. In a recent overview of the cultural resources of the greater Cedar Mesa area, Jerry Spangler and colleagues (2010:xii) estimate that only about two percent of the overall area has been surveyed. One of the two great houses—the Et Al site (42SA18431)—was reported to William Lipe by hikers in the 1980s and subsequently documented by Winston Hurst and J. Richard Ambler (1993). The Owen Severance site (42SA24584) was discovered by Owen Severance and also subsequently documented by Hurst (1999). The Et Al and Owen sites exhibit many characteristics that may qualify them as Chacoan outliers.

Recent reconnaissance survey by Winston Hurst, Jonathan Till, Owen Severance, Bill Lipe, and R.G. Matson suggests that the agriculturally most productive central portion of Cedar
Mesa may have seen the development of a "symbolic landscape" during the late Pueblo II and/or Pueblo III periods. Hurst and Till (2009; Till 2001) recognize several “great features” on the Grand Gulch Plateau as well as throughout the broader southeast Utah area. More specific to the Et Al and Owen communities, a prehistoric road leading north from the Et Al site may extend several miles to connect the great house with an important spring near the head of Bullet Canyon and also with an isolated great kiva site located north of the spring (Hurst and Till 2009; Matson and Lipe 2009). A site on a prominence just northeast of the Et Al site appears to have a probable circular shrine. This shrine was discovered by the Cedar Mesa Project surveys in the 1970s but its significance was not recognized at this time.

Great Houses and the Et Al and Owen Severance Sites

Archaeologists have long recognized great houses based on characteristics such as architectural features, positions on the landscape, and monumental (or at least high-investment) construction (Lekson et al. 2006; Windes 2004). These features include specific types of masonry, enclosed bi-wall kivas, warehouses, earthworks, roads, surrounding communities, and clear lines-of-sight to other sites and important land features (Lekson et al. 2006). The Et Al and Owen sites exhibit some, if not all, of these types of features. These two sites also contrast markedly with the typical habitation sites that have been recorded on Cedar Mesa, and especially with those of the late Pueblo II period. Cedar Mesa Pueblo II habitation sites are quite small, often appear to have had non-masonry surface structures, and usually represent the residence of a single household (Matson et al. 1988).

The Et Al site includes multiple great house features, including a masonry great house style roomblock (originally two stories, with some standing walls remaining), two associated deep kiva depressions, a shallow, irregular depression that may represent a great kiva, and
several mounded midden areas (Figure 2). Ceramic analysis and previous tree-ring dating indicates a late Pueblo II and a Pueblo III component (Dean 1999). A small probable habitation site dating to the late Pueblo II period is located approximately 35 meters northwest of the great house building (Hurst and Ambler 1993). There are also two linear swales adjacent to the great house that probably represent an associated road segment (42SA28202) that runs north from the Et Al site intermittently for about 3.3 kilometers (Hurst 2009). The road is clearly visible and well preserved in some segments, punctuated by segments that have eroded away. It potentially connects the Et Al site with the HST site, a late Pueblo II site that consists primarily of a probable great kiva. The Et Al site also has a Pueblo III Kayenta component, but a discussion of the social implications of this second component is outside the scope of this paper.

The Owen site consists of a large great house type rubble mound (two stories, with 15-20 rooms), a small unit pueblo with a kiva depression surrounded by masonry rubble, another pitstructure depression with associated slab and jacal evidence indicating at least one surface structure, several other small concentrations of burned jacal, several midden areas, and several associated potential road segments (Figure 3). This site also dates to the late Pueblo II period, as evidenced by the ceramic assemblage.

Great Houses in the Northern San Juan Basin (with an example from the Cibola Region)

An examination of great houses and their associated communities would give us a base for interpreting the Cedar Mesa great house communities. Of the great houses in closest proximity to Cedar Mesa (Figure 4), the Bluff great house is the best documented. This great house is located within the town of Bluff, Utah, southeast of Cedar Mesa. Survey around the Bluff great house identified nine contemporaneous sites ranging between 0.8 kilometers and 9.6 kilometers away (Figure 5). These sites consist of multiple household pueblos, individual unit
pueblos, and a dance plaza site (Jalbert and Cameron 2000:83-84). Joseph Jalbert (1999:101) found that these sites are dispersed along the San Juan River and up Cottonwood Wash and identified three levels of communities for the Bluff great house: the “community core” of sites within three kilometers, the “extended community” within eight kilometers, and the “locality” within 19 kilometers. Jalbert’s community core is of interest to this study, as it most closely resembles the two-kilometer radius defined earlier. Seven sites contemporary with the Bluff great house lie in the community core (Jalbert 1999:101). Compared to the Cedar Mesa site density estimates (which will be discussed later), the Bluff great house community appears rather small, but this might be due to topographical differences. The Bluff great house is located at the base of Cottonwood Wash and along the San Juan River floodplain. Narrow canyons and the area of land necessary for agricultural production may have influenced a more dispersed settlement pattern within the Cottonwood Wash location, with less dispersal in the floodplain area (Jalbert and Cameron 2000:89), while a mesa-top location may not have been as confining.

Edge of the Cedars is a relatively small great house located near Blanding, Utah (Figure 6). This site has been partially excavated, though as Hurst (2000:66) notes, the documentation remains gravely incomplete. I use this great house community as an example despite incomplete data because of its proximity to the Cedar Mesa great houses. The associated community consists of five identified tightly clustered unit and double-unit houses. Hurst observes that more kivas and presumably associated house mounds may have been obliterated during nearby modern house construction, and that other small habitation sites are known to exist or have existed in and around Blanding. Other nearby sites dating to the same time period may also be part of the Edge of the Cedars community (Hurst 2000:75). Though the extent of the Edge of the Cedars
community has yet to be determined, one did exist. The identified immediate community consisted of unit habitations, a pattern we might also see in the Cedar Mesa communities.

Nancy Mahoney (2000) investigated the Cottonwood Falls great house community in her examination of sustainable communities. This community is north of the Bluff great house and east of the Edge of the Cedars great house at the head of Cottonwood Wash. Full-coverage survey conducted by Arizona State University covered an approximately 14-km² area around the great house. This survey located 33 residential sites contemporaneous with the great house (Mahoney 2000:21-22; Figure 7). Jalbert and Cameron (2000:89) note that this community has a similar dichotomous pattern as the Bluff great house: “Habitations in the narrow canyon were more dispersed than the closely aggregated habitations on the mesa top.” Mahoney’s focus in her 2000 study was on the demographic scale of sustainable communities, so she provides some population estimates for the Cottonwood Falls community. In her estimation, the Pueblo II period may have seen a total population of 306 people, with a momentary population of 39 (minimum), 103 (average), or 196 (maximum) people (Mahoney 2000: Table 2.1). Again, this great house community lies in close proximity to Cedar Mesa, but its topographical location is distinct from the mesa top locations of the Et Al and Owen sites.

Two other nearby great houses—Lowry Pueblo and Escalante Ruin in southwestern Colorado—also show evidence of associated communities. Lowry Pueblo “is part of an extensive community that, during the Chaco era, included multiple great houses, numerous small habitation sites, prehistoric roads that radiated from a great kiva, nonresidential storage, specialized ceremonial sites, shrines, and reservoirs” (Cameron 2009:31). The Lowry Community Pattern Survey conducted a 14.5 km² block survey centered on Lowry Ruin (Kendrick 1998; Kendrick and Judge 2000:116). This survey found that the Chaco era Lowry
community (A.D. 1050-1150) showed distinct site clustering of 65 habitation sites (Kendrick and Judge 2000:119, 122; **Figure 8**). Kendrick and Judge (2000:Table 9.1) estimate that the average 20-year momentary population was 385.8 during the late Pueblo II period (based on an estimate of 1.5 persons per 10 square meters of rubble area within the 14.5 km$^2$ survey area). This site density contrasts markedly with any of the previously discussed great houses in southeast Utah. We might expect, then, that the social implications for the dense Lowry community would differ greatly from the Bluff, Edge of the Cedars, and Cottonwood Falls communities.

The Escalante Ruin community was probably limited to a number of small sites on the surrounding slopes (Cameron 2009:33). Within a 300-meter radius (approximately 0.3 km$^2$) of Escalante Ruin, there are at least 12 associated small unit-pueblos that lie at the base of the hill or on benches along the hillside (Reed 1979:115). Reed calls this the associated Pueblo II and Pueblo III community, but notes that many of these sites lie on private land, so they have not been extensively recorded or analyzed. Though incomplete, this site density appears to better reflect that of Lowry Pueblo than of the Bluff, Edge of the Cedars, or Cottonwood Falls communities.

Since 2002, Washington State University has conducted survey around Cox Ranch Pueblo and Cerro Pomo (which both include a great house) and has identified a dense, yet confined community associated with each great house (Duff and Wichlacz 2009). The survey leaves out areas of private landholdings, but overall, 231 sites have been documented within the vicinity, the majority of which date to the late Pueblo II period. These sites are generally habitations or field houses. Andrew Duff and Caitlin Wichlacz (2009) estimate that each community had over 100 (or perhaps as many as 200) residents at any one time. They also note that Whalen’s 1984 survey in the general area showed that settlement density in areas further
away from great houses is dramatically lower than the immediate community. This indicates rather tight boundaries for the Cox Ranch and Cerro Pomo communities. Their proximity and contemporaneous occupation suggests that they may have even been one community and that their residents likely interacted (Duff and Wichlacz 2009), carrying some social implications which may be important to understanding the Et Al and Owen great house communities.

The above examples illustrate wide variance of settlement patterns. There seems to be no standard community size or boundary for Chacoan outlier great house communities, but their examination may allow us to make some inferences about the Et Al and Owen great house communities based on previous sampling survey. Interpretations of social organization based on the communities summarized above may lead us to a better understanding of the social implications for the Cedar Mesa great house communities.

Cedar Mesa Communities and Social Implications

Based on the composition of nearby great house communities, we would expect some contemporary residential settlement connected to the Et Al and Owen sites, though at this time it remains unclear if it is a limited or extensive, dense or dispersed community. Survey surrounding the Et Al and Owen sites would give us a better idea of how many people may have been represented in the communities and if there are any associated roads or shrines, indicators of a symbolic landscape.

Site Estimates

The Owen site is located within the Upper Grand Gulch study area in the Cedar Mesa Project (Matson, Lipe, and Haase 1988, 1990). Seven percent (1.44 km²) of this drainage unit was surveyed, and 46 sites were located, indicating a site density of about 32 sites per square kilometer. Seven (or 15 percent) of the 46 sites located in these quadrats definitively date to the
Pueblo II period (contemporaneous with the Owen site). Only five of these are habitations (Matson, Lipe, and Haase 1990: Table XI:8), meaning about 11 percent of the sites are habitation sites.

In evaluating the site density for the Bullet Canyon drainage, where the Et Al site is located, the four western-most quadrats surveyed in the 1970s were excluded. With these exclusions, the Bullet Canyon quadrats represent about six percent (2.72 km²) inventory of the Bullet Canyon drainage, in which 130 sites were recorded. The site density indicated by these data is about 48 sites per square kilometer. Forty-one (or 32 percent) of the known sites in the Bullet Canyon drainage date contemporaneously with the Et Al site (Pueblo II- Pueblo III), of which 11 (Matson, Lipe, and Haase 1990: Table XI:8), or 27 percent, are habitation sites.

Based on the quadrat survey densities, and following Varien’s (1999) two-kilometer radius, or 13 km², approximation for the extent of a community, we can make estimates for the great house communities in terms of number of associated sites. In the Upper Grand Gulch area, the site density of 32 sites per square kilometer, of which seven percent are Pueblo II, would give us an estimate of 62 contemporary sites within a two-kilometer radius of the Owen great house. Estimating that 11 percent of these sites are habitations, only seven are projected for the Owen community. In the Bullet Canyon drainage, the site density is 48 sites per square kilometer, of which 32 percent are Pueblo II and III, would give us an estimate of 200 contemporaneous sites associated with the Et Al great house. Using the percentage calculated above, then, we may expect that 54 are habitation sites. This higher density can be attributed to the overall higher site density in the Bullet Canyon drainage and with the longer occupation span of the Et Al site. Moreover, elevation and soil differences in the two areas may account for the varied site densities (see Matson, Lipe, and Haase 1990:XI-3-XI-4). Granted, these estimates range over a
broad time span and the households were likely not occupied continuously throughout the periods. A community at any one point in time probably has a much smaller site density than the one observed above. Also, the Et Al and Owen communities may have a higher site density within the two-kilometer perimeter if households were aggregating around the great houses.

Following Varien (1999:107) and Mahoney’s (2000:24-25) use-life estimates for Pueblo II and Pueblo III habitations, we might be able to break down these estimates a bit more. Varien (1999:107) suggests that Pueblo II habitations were only occupied between 16 and 26 years, or one generation. Pueblo III site occupations extend up to 80 years, or four generations. Because the Owen site dates entirely within the Pueblo II period, the seven sites were likely only occupied for one generation each, further reducing the community size. If the Owen site was occupied for approximately 100 years (Hurst 1999), seven habitation sites suggests a small associated community, if any.

At this time, it is difficult to split the expected Pueblo II and Pueblo III sites for the Et Al community, but for the sake of argument, let us assume that about two-thirds date to the Pueblo II period, and the other third date to the early Pueblo III period. We might then expect 36 Pueblo II habitations and 18 Pueblo III habitations. This reduces the community further if we follow Varien’s suggestion that Pueblo II habitations were only occupied for one generation, and Pueblo III sites generally for two to three generations. Because the Et Al site seems to have been occupied longer than the Owen site, the community may not be as large as initially estimated.

Predicting population sizes at this time is tenuous and requires some actual field data collection. Without knowing the actual site types and sizes associated with the great house communities on Cedar Mesa, we cannot make accurate population estimates centered on either room or structure counts. Based on the estimated site densities and types above, it appears that
the Owen community is not nearly as dense as Lowry, and more closely resembles the neighboring Bluff and Edge of the Cedars communities. The Et Al community, however, sits between densities for the Cottonwood Falls and Lowry communities. What, then, are the social implications accompanied by these estimates and what hypotheses can we make about the organization of the Cedar Mesa communities?

Mahoney (2000:20) examines communities in terms of residential and sustainable units, unlike Varien’s (1999) social notion of community. She defines residential communities as spatially distinct clusters of residences and sustainable communities as the spatial and demographic scale of a social network needed to maintain residential communities. She estimates that a minimum of 475 people would be necessary to maintain a demographically stable social unit. Using survey information from four great house communities, including Cottonwood Falls, Mahoney (2000:25-26) finds that residential communities surrounding great houses contained fairly small populations. Therefore, larger, sustainable communities would have been essential to community maintenance. The Et Al and Owen communities likely did not meet Mahoney’s 475-person limit for biological reproductive sustainability. This might indicate that the communities would have had to interact with other nearby communities and were not isolated, socially reproductive units. Keith Kintigh (2003:104-105), however, disagrees with Mahoney, noting that Kanter suggests pilgrimages to Chaco Canyon may have facilitated marriage networks, contracting sustainable networks that maintain demographic stability. In examining the ability for the Et Al and Owen communities to biologically reproduce, then, investigations should be made into the communities’ relationship with Chaco Canyon, or perhaps even other outlier great houses.
Settlement patterns might also tell us about the economic sustainability of the Cedar Mesa communities. Kendrick and Judge (2000:126) observe changes in the organization of households and communities in the Lowry region and argue that these changes “reflect a relative loss of autonomy (or control) over economic production at the household level by the end of the 13th century.” Increased population during the Chaco era may have intensified competition for resources between households, and competition may have been expressed by emulation of great house architecture at the household level (Kendrick and Judge 2000:126). The Lowry great house residents may have introduced different ways of organizing labor, and as population and aggregation in the Lowry community increased, reaching its height during the Chaco era, households may have increasingly adopted the great house style of labor organization. Thus, the community, rather than the household, increasingly made decisions regarding economic pursuits of the household, especially access to important resources. This may be a reaction to the ability to access resources during a period when demographic expansion was testing the region’s carrying capacity. Organizational focus shifted from the household to a settlement of related households in order to pool more labor and provide a competitive advantage (Kendrick and Judge 2000:128). Because the Et Al community density more closely resembles that of the Lowry community, Kendrick and Judge’s speculations about Lowry’s corporately organized community might be similar to how the Et Al community organized themselves in terms of economic production. Access to resources may have been tightly controlled in the Et Al community, while households may have been more autonomous in the Owen community. At this point I am unable to make any more conclusions without empirical data. The spatialization of households and field houses in the Cedar Mesa communities may shed light on this once I have survey data.
Ruth Van Dyke (1999) argues that the construction of a great house within the Andrews community (south of Chaco Canyon in northwestern New Mexico) might suggest competition among communities. Citing Renfrew and Cherry’s (1986) peer-polity model, she notes that the construction of highly visible great houses may have been an attempt to bolster personal prestige (Van Dyke 1999:64). If other local leaders or communities saw these, they may have emulated them in order to stay competitive. Thus, the presence of multiple great houses and great house communities on Cedar Mesa may indicate competition between communities. This would further support Kendrick and Judge’s (2000) arguments that communities became competitive economically, but might also show that the Cedar Mesa communities were competitive symbolically and politically. The scale of potential competition has yet to be determined, but examination of great house and emulative household construction in the Cedar Mesa communities might imply competitive relationships.

Communities may have also buffered risk, while mediating competition for resource access. Adler (2002:29) repeats the idea that the community is a social organizational entity that operates to define access to necessary resources. He writes:

Although the spatial distribution of community members does affect how often community members interact, the community still serves as an active social theater in which claims of resource access rights are mediated above the level of the primary residential or kin group. Thus, communities play a substantial role in the social definition of local resource use and access (Adler 2002:29).

Therefore, communities share risk, interdependence and identity. Adler (2002:30) asserts that land-tenure systems would have provided “game rules” allowing people to negotiate the theories and histories of resource access. Thus, the availability of land might have been conditioned by the extent of community membership. This is also important in Kendrick and Judge’s (2000) discussion of the Lowry community. Identification with the Lowry community may have been
acknowledged by gaining land tenure. The density of the community would influence access to
lands, and this might indicate that the community, rather than the household, increasingly
controlled land-tenure systems. Adler (2002:31) writes: “The community, then, is a group-based
risk-buffering strategy that establishes and reproduces access to resources, social identities,
territorial boundaries, and interdependent relationships on a local level.” The types of
communities (aggregated or dispersed, dense or sparse) we might find on Cedar Mesa could
show the extent to which these risk-buffering strategies were augmented. A more tightly
bounded, dense community might rely on these strategies more heavily than a less-defined,
discrete community. Furthermore, Adler (2002:35) suggests that communities may have
included contrasting household configurations, resource use groupings, and social identities. I
note this because in identifying Cedar Mesa communities, we must also pay particular attention
to indicators of multiple identities (through ceramics, architecture, etc.). This would imply that
various groups may have been negotiating space within the Cedar Mesa communities, and might
be particularly important when examining the Pueblo III Kayenta component at the Et Al site.

Adler’s discussion raises another important aspect of communities, that is, their ability to
integrate members. Thomas Windes and colleagues (2000:45) argue that great houses drew
small houses together. They write that visibility between small houses and great houses within
two kilometers was strong during Chacoan occupation before A.D. 1000 (Windes et al. 2000:45).
Visibility may have been an important indicator of prestige (see Van Dyke 1999), but may also
have reinforced identification with a specific community, with a great house as its integrative
structure. Moreover, distance between small houses and the great house is a possible measure of
community integration and social and political control. Tight aggregation around great houses
might imply tight integration (Windes et al. 2000:49). When examining the Cedar Mesa
communities, then, observing visibility to the great house and the level of aggregation are important in understanding the level of integration for the Et Al and Owen communities.

In addition to socially integrating people, communities likely represent some level of political integration. William Lipe (2002) examines whether community and regional populations were large enough to support some level of socio-political hierarchy in the Mesa Verde region during the Pueblo III period. He also attempts to make inferences about political relationships based on settlement spatial distributions and rank-size profiles, and asks if the character and distribution of public architecture provides evidence of political leadership strategies (Lipe 2002:205). During this period, Lipe argues that community populations probably were large enough to support a regionally integrated polity with formal hierarchies, and that settlement cluster proximity indicates that communities would have had to accommodate one another politically. When examining rank-size analyses, Lipe (2002:219) argues that the rank-size distribution for the early Pueblo III period tentatively indicates that Mesa Verde settlement systems were well integrated, with developed hierarchy of political or economic functions. Once we know more about the Et Al and Owen communities, we might be able to infer political organization based on Lipe’s argument. Depending on population estimates, we would be able to argue for whether or not the communities were politically integrated, and similar rank-size plots might support this. Assuming the Et Al and Owen great house sites are community centers, we can also safely call them integrative facilities, indicating some sort of socio-political organization within the communities. The scale at which these centers served an integrative function depends on the size and distribution of the surrounding communities.

Conclusion
An examination of Chaco-era great house communities across the Northern San Juan shows that communities vary, but the observations of these communities can tell us much about what to expect for the Cedar Mesa communities. Estimates for the Et Al and Owen settlement patterns shows that the Et Al community likely supported a higher population, aligning it with, but not to the full extent of, the Lowry Pueblo, Escalante, Cox Ranch Pueblo, and Cerro Pomo communities. In terms of the expected number of habitations, the Owen community probably resembled the Bluff and Edge of the Cedars communities. Although I cannot yet make population estimates for the Cedar Mesa communities, these different settlement patterns carry significant social implications.

First, we can make some assumptions about the ability of the Et Al and Owen communities to socially reproduce. Following Mahoney (2000), it is unlikely that the Et Al and Owen communities were socially isolated units. They either interacted with each other or other Chacoan outlier communities (or possibly even Chaco itself) in order to maintain sustainable social units. Second, the more densely settled Et Al community likely organized itself differently in terms of economic sustainability and resource management. The community, or a communal authority, may have more tightly controlled access to resources in the Et Al community than in the Owen community. This might mean that the Et Al community was able to generate more surpluses, a hypothesis that could be explored by looking at access to arable land in each community. The more dense Et Al community may have been in greater competition socially and economically on the household and community level, as well. Finally, integration at the Et Al community may have been much stronger than in the Owen community. Aggregation might indicate tighter integration in terms of social identity, as well as in terms of sociopolitical organization.
Clearly, more empirical data is needed before definitive statements can be made about the Et Al and Owen communities. The above examination of other great house communities and potential social implications, however, allows some hypotheses for what to expect. Further survey and analysis of settlement patterns, coupled with room and possibly ceramic rim counts, will allow population estimates, further supporting any conclusions about the social implications of the Et Al and Owen communities. This paper serves as a starting point for understanding two Chaco-esque Cedar Mesa communities.
Figures

Figure 1. Northern San Juan Region (Kohler et al. 2008: Figure 3)
Figure 2. Et Al site (Morin et al. 2009)
Figure 3. Owen Severance site (Morin et al. 2009)

Figure 4. Northern San Juan region showing great houses (from Kendrick and Judge 2000: Figure 9.1)
Figure 5. Bluff great house community (Jalbert and Cameron 2000: Figure 6.4)

Figure 6. Edge of the Cedars great house (Hurst 2000: Figure 5.2)
Figure 7. Cottonwood Falls community (from Mahoney 2000: Figure 2.3)
Figure 8. Lowry settlement pattern for the late Pueblo II period (Kendrick and Judge 2000: Figure 9.6)
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