

MATRILOCALITY, CORPORATE STRATEGY, AND THE ORGANIZATION OF PRODUCTION IN THE CHACOAN WORLD

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Kinship is central to an understanding of sociopolitical organization and the organization of production in Chaco Canyon. Between A.D. 700 and 900, lifeways in the Chacoan world underwent a transformation that reflects the evolution of matrilineal residence. Matrilocal groups became the foundation of a polity based on a corporate political strategy. Matrilocality provided the peoples of the Chaco region a social structure in which women were able to form stable agricultural communities while men were freed to take part in long-distance resource procurement and trade. Leaders mobilized goods from across the polity for corporate-affirming activities, such as construction of great houses. This corporate strategy is evident in an examination of turquoise production. The production of turquoise ornaments was diffuse and uncontrolled, but the consumption of turquoise, at least in Chaco Canyon, was highly centralized. This is what we would expect to see in a polity operating within a corporate strategy.

El parentesco es central para entender la organización socio-política y la organización de producción en Cañón Chaco. Entre d.C. 700 y 900 la manera de vida en el mundo Chacoño se cambió reflejando la evolución de la residencia matrilocal. Los grupos matrilocales convenientes la fundación de una región política basada en una estrategia política corporativa. La matrilocidad suministró a la gente Chacoña una estructura social en que las mujeres fueron capaces de formar comunidades agrícolas estables mientras los hombres fueron libres de conseguir recursos y hacer negocios de larga-distancia. Los líderes movilizaron recursos al través de la región política para actividades corporativa-affirmando, como la construcción de las Casas Grandes. Esta estrategia es evidente en una investigación de la producción turquesa. Los ornamentos turquesos fueron fabricados por familias quien especializaron en la producción artística pero la producción fue difusa y incontrolada. Sin embargo la consunción de turquesa fue altamente especializada, al menos entre Cañón Chaco. Eso es precisamente que esperaríamos ver en una región política funcionando entre una estrategia corporativa.

Among the most striking monuments of ancient North America are the Chacoan great houses. Generations of archaeologists have marveled at their scale and craftsmanship and wondered why they were built, what purposes they served, what kind of society fostered the construction of such impressive structures. These questions are made only more enigmatic with knowledge of the archaeological record for the era preceding great house construction. Between A.D. 700 and A.D. 900 lifeways in the Chacoan world underwent a transformation. Single-family pit structures, a basic residential form since as early as 200 B.C., were given up for multifamily pueblos. What accounts for this transition? What does it mean for our understanding of the organization of production in the Chacoan world?

I suggest the development of pueblos may reflect

the evolution of matrilineal residence and, more specifically, of a polity rooted in the possibilities and constraints such residential groups create. I suggest emergent leaders in the Chacoan polity used matrilineal groups as the foundation of a corporate political strategy. As my colleagues and I have explained in a series of recent articles (Blanton 1998; Blanton et al. 1996; Feinman 2000), leaders following a corporate political strategy attempt to build a power base by developing and promoting activities that reinforce the corporate bonds that tie members of the polity together. A common corporate strategy is, for example, to mobilize goods from across a polity for large public rituals or construction projects that bring members of the polity together in corporate-affirming activities (activities that seem reflected in the Chacoan great houses and pre-Chacoan great kivas).

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My colleagues and I have argued that corporate strategy should be seen as one end of a continuum of political strategy with the opposite end being what we have called an exclusionary or “network” strategy. Leaders following a network strategy attempt to build a power base by controlling access to networks of exchange and alliance both within and outside the polity (Blanton et al. 1996:4–5; Peregrine 1992). Thus a network strategy is one in which leaders attempt to monopolize sources of power, while a corporate strategy is one in which leaders attempt to share power across different groups and sectors of a polity.

It is important to note that corporate and network strategies lie on a continuum and are not “pure” strategies in any given case. Rather, leaders tend to promote more corporate-oriented strategies or more network-oriented ones, but it is unlikely any leader will promote a “purely” corporate or network strategy. It is also important to make clear that these strategies are used in societies with varying degrees of political centralization, scale, and technological complexity. They *do not* define societal “types” nor do they define a unilineal evolutionary trend.

While archaeologists have tended to ignore corporately oriented polities in favor of the often more colorful network-oriented ones, several good examples do exist, perhaps the most prominent being Teotihuacan and the Indus civilization. In both cases we find few of the typical indicators of powerful rulers—there are no royal tombs, few or no representations of rulers, and where writing is present rulers are rarely mentioned—such polities seem “faceless” (Blanton 1998:149). And yet these “faceless” polities were able to construct cities, conquer large regions, and integrate tens of thousands of people. Similarly Colin Renfrew (1974) described what he called “group-oriented” chiefdoms in third millennium B.C. Europe that were capable of organizing labor to produce large public works suitable for communal ritual within an apparently egalitarian framework where political authority was “faceless and anonymous” (1974:79).

The ethnographic literature provides another picture of such “faceless” polities. Leach (1954) describes *gumlao* chiefdoms organized around egalitarian principles among the Kachin of highland Burma. Leaders in *gumlao* polities (who Leach terms “headmen” to distinguish them from the *gumsa* chiefs of other Kachin polities) have no special rights

or status, receive no tribute or compensation for their work, and are powerless in terms of judicial authority. Yet Leach (1954:206) argues that in terms of political authority, “in practice a *gumlao* ‘headman’ may be hardly distinguishable from a *gumsa* ‘chief.’” How do such *gumlao* leaders gain authority? The answer Leach (1954:263, 275) gives is that they do so by appealing to corporate ideology and supportive myths and principles of behavior. It is important to note that polities with a *gumlao* orientation are not hindered in what they can accomplish—they build and maintain agricultural terraces, defend themselves against enemies, engage in trade with other polities—and yet they do so within a framework that downplays status differences and individual aggrandizement (Leach 1954:231–238).

While the idea of corporate political strategy was initially put forward as part of a theory for the evolution of complex societies in Mesoamerica (Blanton et al. 1996), several of the papers in this issue of *American Antiquity* use it as a model of political behavior to provide insight into the structure and operation of the ancient Chacoan polity. Timothy Earle, for example, explains that the focus of political strategy in the Chacoan polity appears to be “staple finance”—the mobilization of goods for corporate activities. Similarly, Colin Renfrew suggests that great houses were used for large public rituals, rituals coordinated and funded by leaders whose activities maintained the corporate orientation of the polity. While not directly employing the idea of a corporate-oriented polity, he suggests that these rituals also served to legitimate the authority of the leaders who hosted them, just as the mobilization of materials used in them did. Thus both Earle and Renfrew suggest that a basic political strategy in the Chacoan world was the coordination of corporate rituals.

What effects might a corporate orientation have on the organization of production? We would expect production in corporate-oriented polities to be diffuse, with no clear centers of control, and to be dispersed across the polity. This is what we appear to see in the Chacoan world. We would also expect production to be directed toward group rather than individual consumption. Again, this is what we appear to see in the Chacoan world. We would expect consumption, on the other hand, to be focused at points of group articulation. In the Chacoan world those points of articulation appear to be great houses and great house middens. Thus the idea

that the Chacoan polity was corporately oriented seems both a reasonable and useful one. It appears to fit the pattern of the material record and provides useful insights into how production may have been organized.

Matrilocal Residence in the Chacoan World

Rather than further discuss the nature of corporate political strategies in the Chacoan world (which is discussed in more detail by Earle and Renfrew), I would like to focus on the context in which those strategies were employed—the context of matrilineal residence. As I stated above, I believe that the pit-structure-pueblo transition reflects a transition to matrilineal residence (also see James 1994), and I have two fundamental reasons to accept this assertion. The first is that a number of the most likely modern descendants of the Chacoan people are matrilineal. Could the inhabitants of the Chaco region have been matrilineal from very early in their history? It seems unlikely. The Archaic hunter-gatherers who populated the American Southwest were probably patrilineal or neolocal, as patrilineal residence is by far the most common form of post-marital residence in the world (about 60 percent of known societies), and neolocal residence appears to be a common adaptation of hunter-gatherers in marginal environments. Matrilineal residence only occurs in about 10 percent of known societies, and there is an unusual clustering of matrilineal groups among likely Chacoan descendants (including the modern Hopi and Zuni). It is very likely, therefore, that this “pocket” of matrilineality has relatively recent roots (Martin 1950; Steward 1955).

My second reason for suggesting the adoption of pueblo dwellings reflects the evolution of matrilineal residence comes from Melvin Ember's (1973; replicated by Divale 1977; also see James 1994:120–124) finding that matrilineal societies have significantly larger dwellings than patrilineal ones. The dwellings are larger because they house the families of several related women who together form a single economic (and residential) unit under matrilineal residence. Ember's (1973) findings suggest that societies with patrilineal residence tend to have dwellings that are less than 60 square meters in floor area, while matrilineal societies tend to have dwellings larger than 100 square meters in total floor area. Such a shift is clearly evident in Chaco Canyon dwellings in the period from A.D. 700 to 1100. For

example, the data on small sites presented by Peter McKenna (1986) suggest that during the period between A.D. 500 and 700, pit structures averaged about 15 square meters in floor area, and this average size remained fairly constant in the period between A.D. 700 and 900, although variation in size seems to have increased. When the pueblos began to be constructed, in the period between A.D. 900 and 1100, individual rooms averaged about 7 square meters in floor area, but each site consists of an agglomeration of these rooms, giving overall sizes of the room blocks a range from roughly 70 square meters (29-SJ-629) to over 300 square meters (29-SJ-633). Clearly dwelling size increased in a manner consistent with the evolution of matrilineality, and, in fact, the conclusion reached by McKenna (1986:38), that this change marks a transition from single-family to multifamily dwellings, is also consistent.

If we accept that the pit structure-pueblo transition marks the evolution of matrilineal residence among the inhabitants of the Chaco region, it is reasonable to ask why matrilineality evolved and why it evolved when it did. The answers to these questions go well beyond the purpose of this paper, but there are several general conditions that appear to foster matrilineality, each of which may have played a role in the Chacoan case. Matrilineal residence has been shown to evolve where either (1) a group of migrants has entered a previously inhabited region (Divale 1984); (2) there is frequent extra-community warfare (Ember et al. 1974); (3) significant long-distance trade relations have recently been introduced (Peregrine 1994); or (4) a group's cultural practices are under stress due to contact with more dominant societies (Helms 1970). These four explanations share a common element: competitive interaction with other societies.

Why does competitive interaction foster matrilineality? Two answers have been given: (1) matrilineal residence creates a culturally stable core group through which children can be raised in a “traditional” manner (Helms 1970; Peregrine 1994); and (2) matrilineal residence allows men to be absent from the core group for long periods of time for trading, raiding, or diplomacy (Ember et al. 1974; Peregrine 1994). Both of these explanations are really opposite sides of the same coin. On the one side, the matrilineal home group allows domestic life to continue with stability even in the face of political and

economic activities taking men away from the home group for long periods of time. On the other side, the fact that men marry out of their natal group appears to foster the development of fraternal associations that can coordinate the labor of large groups of men for activities of pan-societal, rather than natal group or lineage, importance.

Competitive interaction has been routinely put forward as an explanation for both the development of pueblo dwellings and of political centralization in Chaco Canyon itself. Wilcox (1993), for example, argued that the Chacoan polity began as a refuge for displaced populations from the northern San Juan basin, and became centralized as a militaristic polity with an eye to expansion and conquest. Such situations are ones that have repeatedly been suggested as fostering matrilocal residence (see Ember et al. 1974; Helms 1970). Similarly, Weigand (1992; Weigand and Harbottle 1993) argued that an expanding trade network with Mesoamerica was central to sociopolitical developments in Chaco Canyon. In this scenario, one can easily envision matrilocal residence being fostered as a way to allow groups of males to leave for long periods of time on trade expeditions (see Peregrine 1994). Thus, while I am not able to put forward a specific argument for why matrilocality evolved in the Chacoan world when it did, the sociopolitical conditions of the region during the period from roughly A.D. 700 to A.D. 900 (and perhaps even earlier) seem ripe for fostering matrilocal residence.

Matrilocal Residence and the Organization of Production

If we accept the idea that the pit structure-pueblo transition reflects the evolution of matrilocal residence, what are the implications for our understanding of Chacoan polity and, in particular, the organization of production? A good starting point, I suggest, is the idea put forward by David Aberle (1961:661) that "Matrilineal groups arise . . . in connection with women's work groups and the resource bases which these groups control." In his cross-cultural examination of matrilineal societies (and virtually all known matrilocal societies are also matrilineal), Aberle (1961:670) also argues that "matriliny is most likely to develop on a horticultural base, with women doing the agricultural labor." While there has been some debate over the importance of women's contributions to subsistence on the development of

matrilocal residence (see Driver 1956 versus Divale 1984), the data do clearly support Aberle's argument for North American societies (Divale 1974; Ember and Ember 1971).

Subsistence production in a matrilocal Chacoan world would be organized around women's work groups. These work groups, in turn, would likely be composed of members of individual matrilineages who control access to the areas of agricultural land they work. The matrilineages would similarly control access to the agricultural products produced from that land, and women's work groups would handle the tasks of processing and storing those products. Thus we can envision Chaco Canyon being divided up into areas of land controlled by local matrilineages resident at nearby pueblos. Groups of related women, although likely with some help from husbands, sons, or brothers, would prepare and sow fields of corn, beans, and squash, rotating those fields on a regular basis around the areas of land they control.¹ These groups would harvest the crops, and prepare them for storage by drying the beans and squashes, and grinding the corn. Women would have been the most likely producers of basic storage utensils; that is, ceramics. Ceramic production was likely organized in much the same way as subsistence, through groups of related women. These groups would have formed, slipped, fired, and painted the ceramics as a group, with the whole process taking several days and perhaps being repeated once every few months, as new ceramics were needed.

What would men contribute to subsistence? The simple answer is meat. Hunting, especially during the Pueblo Bonito phase and later, would have been a time-consuming activity, likely requiring the hunter to travel some distance from Chaco Canyon to find game. This is precisely where matrilocal residence provides great benefits, for it allows groups of men to be absent for long periods of time without disrupting the core community (Ember et al. 1974; Helms 1970; Peregrine 1994). In terms of utensils, men would likely have made their own hunting utensils; that is, chipped stone tools. Unlike ceramics, it is unlikely that men would have done so in groups, but rather as individuals producing tools for themselves. Particular men with unique skill in flint-knapping might produce tools for others, but likely not on a large scale. Raw materials would be procured either by directly obtaining them from the source, perhaps in the course of hunting excursions or while

visiting home communities. However, the same freedom that matrilocal residence would have allowed men to be absent for long periods of time hunting would have also allowed them to spend time actively procuring raw materials from long distances or trading with distant communities. Indeed, we might envision a large, formal network of trade relationships spread across the Chacoan world much like the Kula ring of the Trobriand Islanders (who are also matrilineal—see Malinowski 1922).

Men would also be the most likely producers of special craft work and, indeed, of the very pueblos I am suggesting give evidence of Chacoan matrilocality. The raw materials for the pueblos and for craft items would be obtained either directly or through trade, but in either case men would have to be able to leave the home group to obtain these items, and in large work groups, particularly if the work involved transporting beams, or mining stone and minerals. Production of craft items would likely be done by individuals, but matrilocality could promote some form of fraternal craft “co-ops” at individual pueblos, and certainly the construction of pueblos themselves would require a group of coordinated workers (Lekson 1986:257–273; Wills 2000). Such work or craft groups would be created in part to integrate men into their marriage community (much like quilting societies did for rural American women in the nineteenth century). Such integrative mechanisms are important in matrilocal societies, for in-marrying males have few formal means to tie them to the community—they are not important in the domestic economy, and they have no role in the political life of the community. Thus fraternal associations and interest groups often develop as means to create bonds among in-marrying men, as well as bonds between these men and the community.

Such fraternal associations and interest groups would, indeed, extend to other communities. As David Schneider (1961:20) explained this issue, “Matrilineal descent groups have special problems in the organization of in-marrying affines with respect to each other” and, I would add, to the matrilocal group as a whole. In-marrying males may carry political authority and high status in their natal community, but have none in the community of their wife. There, they may be subject to the rule of other males to whom they feel superior or contentious. In short, men become alienated in matrilineal societies (Schneider 1961:20), and some means of alleviating

that alienation are often found. One form is the kind of fraternal associations mentioned above, but another, related, form might be cross-community associations. A third might stem from created relations of debt through gifts and reciprocal feasting. In all cases these would require the communities to become increasingly interactive. This leads, in turn, to the notion that “isolated communities (or smaller groups) consisting of matrilineal core and in-marrying spouses are extremely difficult to maintain” (Schneider 1961:27). Thus, the increased interaction so evident archaeologically in the Chaco region would be a logical, perhaps necessary, result of matrilocal residence.

Matrilocal Residence and Corporate Strategy

The ethnographic record suggests that matrilocal residence often encourages leaders to adopt a network rather than corporate strategy (see Peregrine 1992 for examples). This makes some sense as the ease with which matrilocality allows large groups of men to leave for long periods of time to trade or raid seems to fit nicely with a network strategy. The Chacoan polity, then, may be somewhat unusual in combining matrilocal residence with a corporate strategy. Why did Chacoan leaders pursue a corporate strategy? An important factor may have been the marginal nature of the Chacoan environment, at least for an agricultural economy (Judge 1979, 1989). Places where network strategies thrive, such as highland New Guinea, western Polynesia, and the northwest coast of North America, tend to have temperate climates and extremely rich environments. One factor, indeed, that may promote a network orientation is the fact that virtually any family or lineage group can survive, at least in terms of food, shelter, and other necessities of life, in isolation from the rest of society. What network-oriented leaders control is access to socially relevant goods, knowledge, and events, and not to things needed for survival (Peregrine 1992). A network strategy may not be very successful in a situation where families or lineages cannot easily survive independent of others. Leaders who stress cooperative activities aimed at mutual support and group survival may be more successful in gaining followers than those who stress individual advancement and the exclusion of others from networks of power.

How did Chacoan leaders implement their corporate-oriented political strategies? I suggest there

Table 1. Counts of General Abraders, Lapidary Abraders, and Ceramic Polishers by Location.

Observed (expected)	General Abraders	Lapidary Abraders	Ceramic Polishers	Total
Room	211 (182)	28 (36)	3 (11)	242
Pithouse	131 (141)	24 (29)	32 (18)	187
Ramada/ Plaza	34 (41)	16 (8)	5 (5)	55
Kiva	75 (86)	21 (17)	18 (11)	114
	451	89	58	598

$$\chi^2 = 40.67, df = 6, p < .001$$

Source Data adopted from Akins (1997): general abraders = types 10 and 20; apidary abraders = types 12 and 22; ceramic polishers = type 30.

are at least three areas where a corporate strategy seems manifested in the archaeological record. First, it seems clear that Chacoan leaders promoted events that brought matrilineages together for common purposes at the great houses. This idea is discussed in some detail by Earle and Renfrew in their papers, and I will not elaborate here. Second, I suggest that the shared stylistic features in ceramics and architecture, features that also undergo coordinated change though time, may reflect the sanctioning by Chacoan leaders of efforts to downplay difference and division between matrilineages (see Peregrine 1991 for similar ethnographic cases). Chacoan leaders may have used their influence to promote an emphasis on common bonds of relationship among matrilineages though shared stylistic patterns, ritual practices, and the like. Third, I suggest Chacoan leaders encouraged diffuse production of important religious or ceremonial goods that would be pooled into common activities. This would be in stark contrast to network-oriented strategies in which leaders tightly manage such goods through the use of attached specialists and sumptuary rules (Blanton et al. 1996:5; Peregrine 1992).

Turquoise appears to be a good example of an item with symbolic importance in the Chacoan world that is produced diffusely but consumed within limited contexts. Indeed, the available data suggest that turquoise production is an example of what Flannery and Winter (1976:38-39) term "household specialization"; that is, activities that take place in every community but not in every household. While not every Chacoan community has *in situ* evidence for turquoise bead production, Windes's (1992) study of turquoise debris in foraging ant mounds found that 94 percent of Pueblo II period sites had turquoise debris. Roughly half of all excavated sites in the valley do have *in-situ* evidence of turquoise bead production, and such evidence is found in every area of Chaco Canyon and in both great house and small

house communities. Thus I agree with Windes (1992:162) that, at least from a community perspective, "participation in turquoise jewelry manufacture was universal, or nearly so."

The available data also suggest that turquoise production was not a spatially localized activity within communities, but rather took place in a variety of contexts. Mathien's (1984, 1997) identification of turquoise "workshops" demonstrates that they were located in kivas, pithouses, rooms, and plazas. Thus there is no single specialized location where turquoise bead production took place. Is there a location where turquoise work was more likely to take place than other activities? It appears not, as evidenced by the data presented in Table 1.

Table 1 shows the cross-tabulation of general abraders, lapidary abraders, and ceramic polishers by their location in excavated contexts within Chaco Canyon. General abraders should tend to be located where unspecialized daily activities take place, while ceramic polishers should be located where ceramic production takes place. By comparing the locations where lapidary abraders are found (Figure 1), one should be able to determine where turquoise bead production took place. The value of chi-squared suggests that the distribution of these items is not random, and if we examine this table more closely, we see that general abraders are much more likely to be found in rooms than chance would suggest, but that ceramic polishers are much less likely to be found there. Ceramic polishers appear much more likely than would be suggested by chance to be found in pithouses or kivas, and lapidary abraders are more likely to be found in ramada or plaza areas than chance would suggest. This pattern holds up if we examine only lapidary and general abraders ($\chi^2 = 15.25, df = 3, p < .01$), but changes slightly if we examine only lapidary abraders and ceramic polishers. In this case, lapidary abraders are more likely to be found in rooms than would be expected by chance

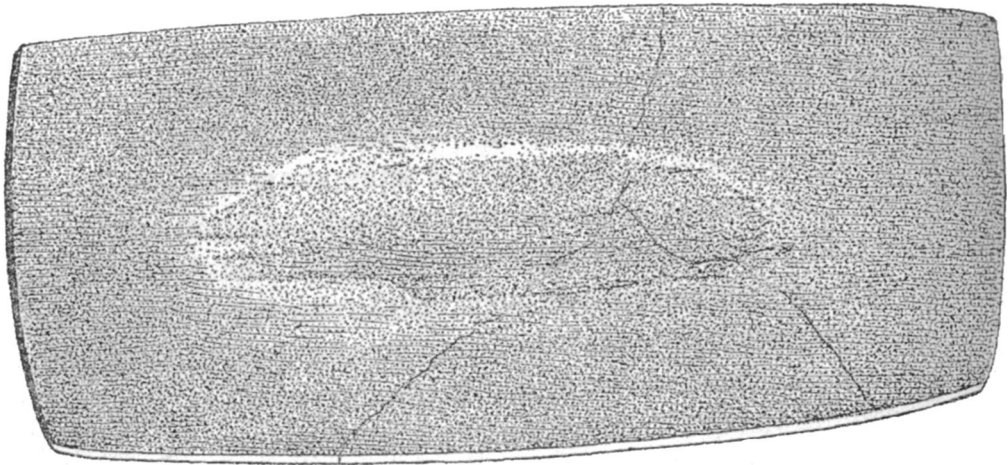


Figure 1. Lapidary abrader recovered from Pueblo Bonito. From Judd (1954), figure 18. Courtesy of the Smithsonian Institution, National Anthropological Archives.

($\chi^2 = 21.29$, $df = 3$, $p < .001$). If we take the presence of lapidary abraders as an indicator of turquoise bead production (Akins 1997:733), it appears that there were no special locations where turquoise bead production took place; rather, turquoise beads were produced in a variety of locations, a preferred one perhaps being outside, in the shade of a ramada or on a plaza.

The image we get from this conclusion is that turquoise bead production was not very intensive, but rather was done in favored locations in peoples' "spare time." This seems in stark contrast with some scholars' suggestions that beads were produced by elite-influenced (and perhaps controlled) specialists (Weigand 1992:174), or in factory-like conditions for market exchange (Kelly and Kelly 1975:204). It also seems impossible that the vast number of turquoise beads found in Pueblo II contexts, minimally estimated at some 200,000, could have been produced as a leisure activity.

Experiments on turquoise bead production by Haury (1931) and Jernigan (1978), informed by more detailed experiments on shell bead production by Francis (1988), suggests that a rough estimate of 45 minutes to 1 hour of work would be required to produce a single turquoise bead (Figure 2). This includes roughly 15 minutes to shape the bead, 15 minutes to drill the bead, 5 to 10 minutes to round and polish the bead, and 5 to 20 minutes for raw material acquisition and initial processing (including rough shaping and heat treating).² Thus, an estimate of the time involved in making turquoise beads of one hour per

bead seems reasonable. If this is the case, then it took roughly 200,000 person-hours of labor to produce all the known turquoise beads from Pueblo II Chaco Canyon. This may seem like quite a lot, but if we divide this by the 150 years of the Pueblo II period, then we are talking about something less than 1,500 beads per year. Using the low estimate of Chacoan population, 2,500, and suggesting that only adults made beads, this figure would only require a couple of beads a year from each manufacturer. Clearly this is misleading, because not all produced beads have been found, and not all adults were likely making them, but it does demonstrate that turquoise bead production could have easily been done in the spare time of a handful of people in each community—it need not have been an intense or specialized production regime.

While turquoise bead production appears to be completely decentralized, the pattern of consumption is totally different. Of all the beads found in excavated contexts in Chaco Canyon, roughly one quarter come from two rooms in Pueblo Bonito, and the majority of them from two individual burials (Color Photo 5, p. 67). Thus, while production is diffuse and uncontrolled, consumption, at least within Chaco Canyon itself, was highly centralized. This is precisely what we would expect to see in a polity operating within a corporate strategy. Turquoise, a relatively "exotic" material with rich symbolic meaning in the Puebloan world, was produced by everyone capable or interested in doing so. It was consumed, however, by particular individuals in spe-

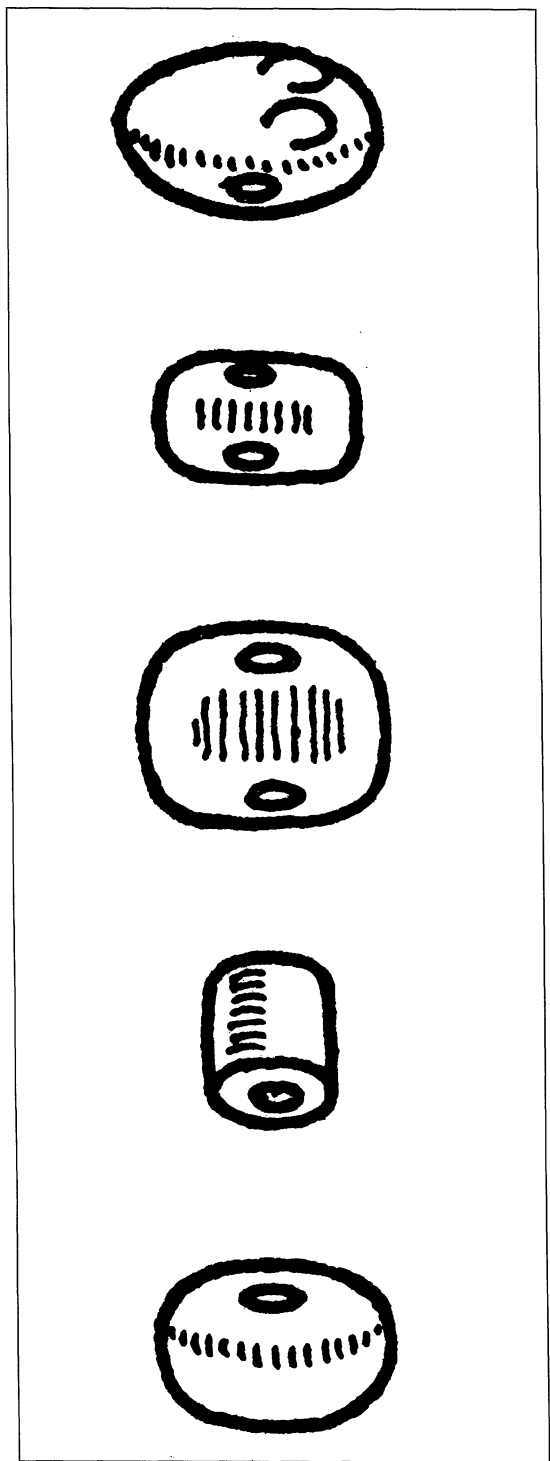


Figure 2. Turquoise beads recovered from Pueblo Bonito averaged 4 mm in diameter, most were discoidal in shape, and are flat-sided. Variations in form are shown here. From Judd (1954), figure 12, drawn by Irvin E. Alleman. Courtesy of the Smithsonian Institution, National Anthropological Archives.

cific contexts and only after being collected into massive amounts. It is interesting that the Pueblo Bonito burials that were accompanied by most of the turquoise found in the canyon were located adjacent to other apparently ritual facilities or storage rooms. It may be that these are not burials whose accompanying riches display conspicuous consumption by a wealthy elite as has often been suggested, but rather burials of corporate leaders containing gifts from individuals throughout the polity as a means of displaying the corporate bonds manifested through the deceased.

Conclusions

Chaco was a corporate-oriented polity, but it was, perhaps more importantly, a matrilineal polity. Corporate strategies at once fostered and were fostered by the evolution of matrilineal residence. Matrilineality provided the peoples of the Chaco region a social structure in which women were able to form stable agricultural communities while men were freed to take part in long-distance resource procurement and trade. Political leaders took advantage of this situation and developed strategies to build a power base from them. Out of this matrilineal structure and the associated corporate political strategies arose the large communities that came to dominate the Chacoan world, the intense interaction between those communities, and the rise of influential pan-societal fraternal groups. To understand the “Chaco phenomena,” the organization of production in the Chacoan world, the intense interaction between Chacoan communities, or indeed any other aspect of Chacoan society, I argue that one must approach it through the lens of matrilineal residence.

To argue that kinship is central to Chacoan sociopolitical organization, and to the organization of production in particular, should not be surprising to us as anthropologists. And yet in the literature on the Chacoan world we find little discussion of kinship, and we even find scholars suggesting that the Chacoan archaeological record “indicates a degree of centralization and political specialization beyond the capacity of societies whose decision making is carried out within the framework of kinship . . .” (Sebastian 1991:119). This is unfortunate, for it contradicts what we know about societies from all over the world, even highly politically centralized ones like Natchez, Tonga, and Kongo. I have suggested elsewhere that archaeologists often confuse ethno-

graphic analogy with ethnology (Peregrine 1996). Here I will go farther to suggest that archaeologists often forget the lessons ethnology taught us as anthropologists. To argue, as an anthropologist, that kinship is not important to understanding any given society is problematic; to suggest it is unimportant to understanding the organization of a non-state society is ridiculous. Kinship in all non-state societies structures social relations. It defines who a person is, who their leaders are, what resources they have access to, whom they may marry, where they may live, what occupations are available to them, and spiritual practices they will follow. Kinship influences, bounds, and shapes all aspects of life. To understand a non-state society, like Chacoan, in the absence of understanding the relations of kinship is an impossible task.

One reason archaeologists may shy away from the discussion of kinship in the societies we study is because kinship is not material in nature. It is not something we can readily measure like the volume of chert debris or the number of ceramics.³ As I hope the discussion of the pit structure-pueblo transition suggests, kinship does have material correlates that can be identified through ethnology. Indeed, ethnological studies have demonstrated strong relationships between social organization and the material record (see Ember and Ember 1995 for an overview). But even if such material correlates are unavailable, we must still ask the question of what kinship structures were present in the ancient societies we study and how they may have affected things like the organization of production. If we consider only those processes we can see clearly in the archaeological record, we become like the proverbial drunk seeking his lost wallet under the lamppost, even though he did not lose it there, because that is the only place where it is light enough to see. What the drunk really needs is a flashlight, and I suggest that archaeologists need the flashlight of ethnology to find kinship in the archaeological record.

Production in the Chacoan world was organized through kinship. I have argued that Chacoan kinship included matrilineal residence as one of its features. I might further suggest, based on its common association with matrilineal residence, that the Chacoans also practiced matrilineal descent, and that local matrilineal groups formed the basic structure of Chacoan society. Rather than an overarching political

system dominating the Chacoan world (Lekson 1997), I suggest that what we see is an overarching social system, a social system based on matrilineal residence and the demands and opportunities it created.

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References Cited

- Aberle, D.
1961 Matrilineal Descent in Cross-Cultural Perspective. In *Matrilineal Kinship*, edited by D. Schneider and K. Gough, pp. 655–729. University of California Press, Berkeley.
- Akins, N. J.
1997 The Abraders of Chaco Canyon: An Analysis of their Form and Function. In *Ceramics, Lithics, and Ornaments of Chaco Canyon*, edited by F. J. Mathien, pp. 701–946. National Park Service, Santa Fe.
- Blanton, R. E.
1998 Beyond Centralization: Steps Towards a Theory of Egalitarian Behavior in Archaic States. In *Archaic States*, edited by G. Feinman and J. Marcus, pp. 135–172. School of American Research Press, Santa Fe.
- Blanton, R. E., G. M. Feinman, S. A. Kowalewski, and P. N. Peregrine
1996 A Dual-Processual Theory for the Evolution of Mesoamerican Civilization. *Current Anthropology* 37:1–14.
- Divale, W. T.
1977 Living Floors and Marital Residence: A Replication. *Behavior Science Research* 12:109–115.
1984 *Matrilocal Residence in Pre-literate Society*. UMI Research Press, Ann Arbor.
- Driver, H.
1956 An Integration of Functional, Evolutionary, and Historical Theory by Means of Correlations. *Indiana Publications in Anthropology and Linguistics, Memoir* 12:1–35.
- Ember, M.
1973 An Archaeological Indicator of Matrilineal versus Patrilineal Residence. *American Antiquity* 38:177–182.
- Ember, M., and C. R. Ember
1995 Worldwide Cross-Cultural Studies and their Relevance for Archaeology. *Journal of Archaeological Research* 3:87–111.
- Ember, M., C. R. Ember, and B. Pasternak
1974 On the Development of Unilineal Descent. *Journal of Anthropological Research* 30:69–94.
- Feinman, G. M.
2000 Dual-Processual Theory and Social Formations in the Southwest. In *Alternative Leadership Strategies in the Pre-hispanic Southwest*, edited by B. Mills, pp. 207–224. University of Arizona Press, Tuscon.

- Flannery, K. V., and M. Winter
1976 Analyzing Household Activities. In *The Early Mesoamerican Village*, edited by K. V. Flannery, pp. 34–47. Academic Press, New York.
- Francis, P.
1988 The Manufacture of Beads from Shell. In *Proceedings of the 1986 Shell Bead Conference*, edited by C. F. Hayes, pp. 25–36. Rochester Museum and Science Center, Rochester, NY.
- Haury, E. W.
1931 Minute Beads from Prehistoric Pueblos. *American Anthropologist* 33:80–87.
- Helms, M.
1970 Matrilocality, Social Solidarity, and Culture Contact: Three Case Histories. *Southwestern Journal of Anthropology* 26:197–212.
- Hill, J. N.
1970 *Broken K. Pueblo: Prehistoric Social Organization in the Southwest*. University of Arizona Anthropological Papers 18. University of Arizona Press, Tucson.
- Jernigan, E. W.
1978 *Jewelry of the Prehistoric Southwest*. University of New Mexico Press, Albuquerque.
- James, S. R.
1994 *Regional Variation in Prehistoric Pueblo Household and Social Organization: A Quantitative Approach*. Ph.D. dissertation, Department of Anthropology, Arizona State University, Tucson.
- Judd, Neil M.
1954 *The Material Culture of Pueblo Bonito*. Smithsonian Miscellaneous Collections, vol. 124. Smithsonian Institution, Washington, DC.
- Judge, W. J.
1979 The Development of a Complex Cultural Ecosystem in the Chaco Basin, New Mexico. In *Proceedings of the First Conference on Scientific Research in the National Parks*, Vol. 2, edited by R. M Linn, pp. 901–905. Transactions and Proceedings Series 5, National Park Service, Washington, DC.
1989 Chaco Canyon–San Juan basin. In *Dynamics of Southwestern Prehistory*, edited by L. S. Cordell and G. J. Gummerman, pp. 209–261. Smithsonian Institution, Washington, DC.
- Kelley, J. C., and E. A. Kelley
1975 An Alternative Hypothesis for the Explanation of Anasazi Culture History. In *Collected Papers in Honor of Florence Hawley Ellis*, edited by T. R. Frisbie, pp. 178–223. Papers of the Archaeological Society of New Mexico, Number 2, Albuquerque.
- Leach, E.
1954 *Political Systems of Highland Burma: A Study of Kachin Social Structure*. Harvard University Press, Cambridge, MA.
- Lekson, S.
1986 *Great Pueblo Architecture of Chaco Canyon, New Mexico*. University of New Mexico Press, Albuquerque.
1997 Rewriting Southwestern Prehistory. *Archaeology* 50:52–55.
- Longacre, W.
1970 *Archaeology as Anthropology: A Case Study*. University of Arizona Anthropological Papers 17. University of Arizona Press, Tucson.
- Malinowski, B.
1922 *Argonauts of the Western Pacific*. Waveland Press, Chicago.
- Martin, P. S.
1950 Conjectures Concerning the Social Organization of the Mogollon Indians. *Fieldiana Anthropology* 38:556–569.
- Mathien, F. J.
1984 Social and Economic Implications of Jewelry Items of the Chaco Anasazi. In *Recent Research on Chaco Prehistory*, edited by W. J. Judge and J. D. Schelberg, pp. 173–186. Reports of the Chaco Center, Number 8. National Park Service, Santa Fe.
1997 Ornaments. In *Ceramics, Lithics, and Ornaments of Chaco Canyon*, edited by F. J. Mathien, pp. 1119–1220. Publications in Archaeology 18G, Chaco Canyon Studies. National Park Service, Santa Fe.
- McKenna, P. J.
1986 A Summary of the Chaco Center's Small Site Excavations: 1973–1978. In *Small Site Architecture of Chaco Canyon*, edited by P. J. McKenna and M. L. Truell, pp. 5–114. Publications in Archaeology 18D, Chaco Canyon Studies. National Park Service, Santa Fe.
- Peregrine, P. N.
1991 Some Political Aspects of Craft Specialization. *World Archaeology* 23(1):1–11.
1992 *Mississippian Evolution: A World-System Perspective*. Prehistory Press, Madison, WI.
1994 Trade and Matrilineality: A Hypothesis Based on World-Systems Theory. *Cross-Cultural Research* 28:99–110.
1996 Ethnology versus Ethnographic Analogy: A Common Confusion in Archaeological Interpretation. *Cross-Cultural Research* 30:316–329.
- Renfrew, C.
1974 Beyond Subsistence Economy: The Evolution of Social Organization in Prehistoric Europe. In *Reconstructing Complex Societies: An Archaeological Colloquium*, edited by C. B. Moore, pp. 69–95. Bulletin of the American School of Oriental Research, Supplement 20, Cambridge, MA.
- Schneider, D.
1961 Introduction: The Distinctive Features of Matrilineal Descent. In *Matrilineal Kinship*, edited by D. Schneider and K. Gough, pp. 1–31. University of California Press, Berkeley.
- Sebastian, L.
1991 Sociopolitical Complexity and the Chaco System. In *Chaco and Hohokam*, edited by P. L. Crown and W. J. Judge, pp. 109–134. School of American Research, Santa Fe.
- Steward, J.
1955 *Theory of Social Change*. University of Illinois, Urbana.
- Toll, H. W.
1984 Trends in Ceramic Import and Distribution in Chaco Canyon. In *Recent Research on Chaco Prehistory*, edited by W. J. Judge and J. D. Schelberg, pp. 115–135. Reports of the Chaco Center, Number 8. National Park Service, Albuquerque.
- Weigand, P. C.
1992 The Macroeconomic Role of Turquoise within the Chaco Canyon System. In *Anasazi Regional Organization and the Chaco System*, edited by D. E. Doyel, pp. 169–173. Anthropological Papers, Number 5. Maxwell Museum of Anthropology, Albuquerque.
- Weigand, P. C., and G. Harbottle
1993 The Role of Turquoises in the Ancient Mesoamerican Trade Structure. In *The American Southwest and Mesoamerica: Systems of Prehistoric Exchange*, edited by J. E. Ericson and T. G. Baugh, pp. 159–177. Plenum, New York.
- Wilcox, D. R.
1993 The Evolution of the Chacoan Polity. In *The Chimney Rock Archaeological Symposium*, edited by J. M. Malville and G. Matlock, pp. 76–90. Technical Report RM-227. USDA Forest Service, Fort Collins, CO.
- Wills, W. H.
2000 Political Leadership and the Construction of Chacoan Great Houses, AD 1020–1140. In *Alternative Leadership*

Strategies in the Prehispanic Southwest, edited by B. Mills, pp. 19–44. University of Arizona Press, Tucson.

Winds, T. C.

1992 Blue Notes: The Chacoan Turquoise Industry in the San Juan Basin. In *Anasazi Regional Organization and the Chaco System*, edited by D.E. Doyel, pp. 159–168. Anthropological Papers, Number 5. Maxwell Museum of Anthropology, Albuquerque.

Notes

1. This is not the case in some modern puebloan groups, but it is important to note that the idea of women agricultural groups comes not from ethnographic analogy, but from ethnology; that is, in matrilocal societies these kinds of work groups are the norm, as are all the features I am putting forward here. That modern (or ancient) groups may not have followed these practices is understood—there is a range of variation in all human behaviors. However, it seems most reasonable to begin an analysis under the assumption that the

group in question (the Chacoans in this case) were not unusual in their practices, but rather to first determine if common practices are evidenced in the archaeological record before seeking evidence for more unusual ones.

2. This value is per bead; that is, is calculated by estimating the entire time required to travel to a turquoise source, mine the raw material, do rough processing, heat treating, and shape blanks, and then dividing that time by the total number of beads produced from the raw material.

3. The “drubbing” taken by scholars such as Hill (1970) and Longacre (1970) who attempted such analyses has probably not encouraged others to pursue kinship in the archaeological record of the Southwest.

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