OBSIDIAN STUDIES, SOCIAL BOUNDARIES, THEORETICAL MODELS, AND THE DEVELOPMENT OF TRIBELET STRUCTURE IN CENTRAL CALIFORNIA

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ABSTRACT

Because patterns of obsidian use by source have proved to correlate with known ethnographic boundaries, such patterns have been employed to assist in delineating boundaries at time depths for which no ethnographic data are available. Obsidian studies, coupled with operationalized models of both tribelet and pretribelet lifeways, may also allow study of different trajectories in the emergence of tribelets, leading to tribelets with and without sociopolitical complexity.

Introduction

At several times and in a number of different publications Kroeber (e.g. 1925 passim, 1932:257ff, 1962) presented his observations on the numerous small tribes of central California, which he named "tribelets," remarking upon their structural similarity to the city-states of the ancient Greeks and, with reference to tribelets within language families such as the Pomo, drawing structural parallels with the situation in Germany and Italy, where there were numerous politically autonomous and territorially independent kingdoms, duchies, principalities, and free cities, prior to their unification in the mid-19th century. Randy Milliken (1994) has also pointed out to me the structural similarities between California's tribelets and the politically autonomous and territorially independent villages of the Cherokee in North Carolina prior to their unification after European contact (Gearing 1961). An important issue in these parallels is that language may define a level of similarity between peoples but language does not imply either political or territorial unity.

The tribelet in central California, to which Kroeber initially referred as the village-community, often contained not only a primary village (whose name could also serve as the name for the tribelet as a whole) but any number of associated settlements, or satellite villages, which were part of the tribelet. Kroeber pointed out that each tribelet had its own territory with definite boundaries and its members' rights to that territory and the resources within it were recognized by their neighbors. Kroeber summarized, "To the tribelet belonged the land which its members traveled over, lived on, gathered food in, and which they claimed and occupied" (1962:33).

Although obsidian has proved successful in tracing boundaries between tribelets, it has limitations in identifying boundaries in non-tribelet contexts. This limitation, of course, is due to significant differences in lifeways. These differences imply that commodities such as obsidian are moved in space differently in these two contexts. Little attention has been given to the nature of these differences and of the transition from producing goods for personal and immediate community needs to the production of goods to develop a surplus that may be banked to serve future needs.

Territorial Boundaries and the Tribelet

Foreshadowed by debates in the 1950s regarding whether native California was characterized by Archaic or Formative societies, the study of sociopolitical complexity in native California became an important issue during the late 60s and early 70s. Today I believe it's fair to say that California tribelets showed considerable variation in that some were sociopolitically complex and some were not. Those that were tended to have traits such as social ranking, relatively strong but non-coercive central administration, and craft specialization. Yet others appeared to pulse between extremes on a seasonal basis, for much of the year organized as extended families, and for the rest organized in multifamily, permanent villages (cf. Gearing 1958, Oliver 1962). Despite this variation, however, one thing seems clear, each tribelet—or village-community—had well-defined territorial boundaries, although we have reason to believe that some boundaries changed over time.

We can be certain, however, that the tribelet with defined boundaries did not always exist. Archaeological evidence, as well as theoretical modeling, indicates that earlier in time some version of band organization was characteristic of native California, with relatively wide-ranging extended families moving over the landscape to harvest resources as they became seasonally available; in short, adaptations that contributed to Binford's (1980) concept of the "forager" lifeway. We postulate that such families were weakly bounded socially; that is, group membership was marked by a high degree of fluidity. Territorial boundaries were also likely to have been permeable, if only because of the need to insure the presence of a cohort large enough for the young to have suitable marriage partners.

Population growth has been emphasized by many writers to explain the development of the tribelet with its much firmer territorial boundaries. Population growth is often seen to be a consequence of effective foraging methods. As population increases, lower ranked resources become more important and a

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wider variety of habitats containing such resources is included in the seasonal round. Higher population density also increases the implicit and at times explicit competition between groups. In effect, those groups that mutually accepted restrictions on their use of certain resource areas in exchange for exclusive use of other resource areas reduced overt competition and, when successful, set into motion a series of processes that ensured stability of these boundaries over time. These processes are ones that, through feedback loops, tend to encourage the development of more complex sociopolitical organization. That is, given territorial boundaries, sociopolitical and economic processes tend toward the development of central administration outside of the immediate extended family, and, as such, territorial boundaries can be viewed as part of a system of resource management beyond the level of the extended family. Central administration implies the inherent conflict between different levels of administration: the extended family, the larger kin group, and the tribelet; California archaeologists have not yet addressed this level of interaction.

I suggest that it is not population growth in and of itself that stimulates the development of territorial boundaries, it is the competitive context. Thus, competitive situations that do not directly involve population growth may also prompt the development of territorial boundaries. I suggest that many tribelets in California resulted from situations that did not involve population growth and that in some portions of the state boundaries may have been more permeable and less well-defined than presented by Kroeber in his modal tribelet characterization.

Identification of Territorial Boundaries

It is evident that the discovery of territorial boundaries can assist in monitoring relationships between groups, i.e., those on either side of the boundary, both spatially and temporally, within both economic and social frameworks. On the operational level, it is necessary to identify the archaeological materials and methods, together with appropriate theoretical models, to generate data that can be used to identify boundaries.

Jim Bennyhoff (1977, 1994) found that late prehistoric archaeological districts in central California, districts that he defined in terms of the distribution of archaeological materials, corresponded with the known distribution of ethnolinguistic groups. Although Bennyhoff only summarized the archaeological details which characterized each district, and did not document them in detail, his work pointed one way to discover boundaries between prehistoric communities. Subsequently, during a series of workshops sponsored by the Center for Archaeological Research at Davis between 1967 and 1969, the concept of "locality" was tested by regional specialists who arrived at general agreement that local assemblages could be distinguished on the basis of stylistic differences (Fredrickson 1994:31). In other words, there is widespread agreement that archaeological methods can distinguish between closely related cultures, including known ethnolinguistic entities, given a sufficient sample of archaeological materials.

In the 60s and 70s, a series of changes in the practice of archaeology tended to inhibit the approach used by Bennyhoff and others to define prehistoric localities. For one, the stylistic detail required for some of the fine distinctions is best represented within grave lots. While systematic excavation in search of cemeteries was once a cornerstone of archaeological methods, today, because of legal requirements and the concerns of Native Americans regarding proper treatment of the dead, such an approach is no longer appropriate. For another, the impact of conducting archaeology in a regulatory context influences the selection of sites for investigation; that is, sites are now selected to a large extent on the basis of management rather than traditional research needs.

The situation is made more complex in that in some regions in central California, sites at which management needs move us to excavate have soil and other environmental conditions that are not conducive to the preservation of organic materials such as bone and shell; thus tools and ornaments of these materials, important for their stylistic contribution to district definition, are generally not found. Furthermore, it is apparent that during earlier time periods in some geographic areas, cultures were marked by low artifactual diversity and few sociotechnic goods such as beads and ornaments, resulting in a situation in which assemblage definition tends to be based upon a relatively small array of materials that show significant stylistic variability.

Fortunately, archaeologists in northern California (and elsewhere as well) have been able to make use of obsidian sourcing and hydration data to address a number of issues, including the identification of community boundaries. Tom Jackson's (1986) work is particularly important. His analysis of Phase 2 obsidian projectile point data over a large segment of central California yielded important findings regarding obsidian distribution and group boundaries. Among other things, Jackson discovered that while proportions of obsidian sources represented at archaeological sites within tribelet territories are relatively uniform, these proportions may differ dramatically in neighboring tribelets, or on the other hand, they may be similar on both sides of the tribelet boundary, thus making the boundary transparent (Jackson 1986:112). Jackson also demonstrated that the distribution of obsidian by source in tribelet areas did not follow the distance decay hypothesis; that is, within a number of tribelet territories the most common obsidian used for projectile points came from sources that were not the closest. Jackson suggested that the implications of his findings "might imply two things: (1) exchange relationships are defined at the level of tribelets (not individuals or kin groups which make up the tribelets); and (2) social relationships supersede economic considerations such as distance-related costs" (1986).

Jackson's findings provide a wider context in which to place a few similar findings which I recently reported from the Geysers in northeastern Sonoma and southwestern Lake counties (Fredrickson 1989). Ratios of the three major obsidian types in the region—Mt. Konocti, Borax Lake, and Napa Valley—tended to be quite similar at different sites within each of four tribelet territories, but each tribelet had proportions differ-

ent from its neighbors. Further, patterns of obsidian occurrences derived from flakes differed from those derived from projectile points. With respect to flakes, the border between the Kelseyville and Cloverdale tribelets was, in the term used by Jackson, transparent; that is, obsidian in raw form appeared to have passed through a social boundary without observable fall off. By contrast, the differences in obsidian ratios as derived from projectile points were significant. I believe that there is more social information that can be derived from the Geysers data, even keeping in mind Tom Jackson's admonition that boundaries "are complex behavioral phenomena across which some sorts of social exchange are permitted but not others."

Following Jackson, through use of the direct historical approach, we can discern patterns of obsidian ratios whose boundaries conform to known boundaries of ethnographic tribelets; thus we have a basis for extending boundaries back in time through use of obsidian hydration. We have discovered that obsidian proportions frequently shift over time within a locality, but the boundaries defined by the proportions tend to remain relatively constant. In the northern Sonoma Valley, for example, although more data are needed to confirm a relatively complex pattern, differing obsidian proportions support the occurrence of a long-lasting social boundary between Oakmont and Kenwood (Fredrickson 1993). The ratios of Annadel and Napa obsidian change over time on both sides of the boundary, and although the boundary becomes transparent at times it reoccurs at the same location later. Jackson's principle that social boundaries may at times be economically transparent should remind us that obsidian distributions alone are not sufficient to allow an inference as to whether one or two social groups were present in the study locality during the periods of transparency.

In addition, we could easily be in error if we were to assign tribelet continuity across the temporal boundaries over extended periods of time, since different peoples may well use the same natural features to define their boundaries. I note at the Geysers that today's political boundary between Sonoma and Lake counties served as tribelet boundaries prior to Euroamerican contact.

A very common pattern found when tracing obsidian use backward in time within a locality is a marked drop-off in obsidian occurrences as we move backward. Evidence of use as monitored by obsidian disappears at many sites and absolute numbers of specimens tend to decline at others. Occasionally, early sites that were not used later in time are revealed by obsidian distributions. During these earlier periods of low obsidian frequencies, artifact assemblages usually have less diversity than during later times. Also, obsidian seems less important as a commodity and the situation resembles what we might expect before what Jackson (1986:124) refers to as the "mobilization" of obsidian as a surplus occurs. Such mobilization contributed to the development of social and political control over the exchange of localized resources. Cumulatively, these low frequencies suggest that an approach other than obsidian ratios may be necessary to study the presumably more fluid boundaries during earlier time periods.

Pretribelet Archaeological Residues

I suggest that we would be well-served if we examined our theoretical models for their implications as to the nature of archaeological residues that could provide evidence pertaining to boundary behavior. Recall that prior to the emergence of the tribelet, our model postulates the wide-spread occurrence of extended families ranging over a broad territory as they move to harvest resources as they become available. Recall, also, that group membership would have a high degree of fluidity, and territorial boundaries would be highly permeable, and by implication minimally marked.

As we have observed from investigation of sites that we believe are representative of this extended family lifeway, sites typically contain a very low density as well as low diversity of cultural materials. The typical site yields materials indicative of relatively short term habitation. Sites may be quite small or, on the other hand, quite large with localized features containing culturally diagnostic materials that represent camping episodes of extended families, as was found at Pilot Ridge and South Fork Mountain by Hildebrandt and Hayes (1984) in the early 80s. Such sites generally contain only utilitarian items, with rare occurrences of items such as beads and ornaments.

A wide-ranging lifeway implies an increase in opportunity to obtain, either directly or through interaction with others, a wider variety of tool resources (but generally in small quantities) than that found within the territory of a typical tribelet. This situation would result in artifact assemblages, especially obvious in the flaked stone formal tool inventory, characterized by a relative abundance of materials not local to the find site, at times equaling or almost equaling in amount the number of tools from materials available in the site locality. In addition, the ratio of morphological point types to the total number of points is likely to be high as compared with the considerably larger point assemblages from village middens indicative of sedentary or semisedentary lifeways.

Thus, in any given locality where a territorial boundary has been identified and when a "reasonable" number of sites have been investigated, I suggest that the marked drop-off in obsidian frequencies we often find, when accompanied by evidence of the extended family lifeway, marks a time prior to the development of the tribelet and its relatively firm territorial boundaries.

Following Yehudi Cohen in his 1982 paper in the *Journal of Anthropological Archaeology*, I suggest that regardless of the specific factors that contributed to the development of firm territorial boundaries, the existence of such boundaries fostered the development of intergroup relationships to facilitate the procurement of valued resources that were absent in one locality but present in another, whether through restricted natural distributions or through factors such as local crop failure. The regularization of intergroup relationships in this context would add predictability and stability to participating communities. As with the nonce behavior of Great Basin bands when participating in rabbit or antelope drives, central administration of the overall task increases the likelihood of success. In the situa-

tion of the tribelet, the continuing need for external resources acts to entrench the central administration and fosters the differentiation of what Cohen refers to as Boundary Culture, i.e., the processes associated with the articulation of a group with other groups; Boundary Culture is distinct from Inside Culture, which is comparable to the descriptions of lifeways usually provided by ethnographers. The degree of entrenchment is likely to be directly proportional to the importance of external resources to the community's subsistence economy. Moreover, to the extent that central administration is entrenched, to a similar extent will status differences increase within the group.

Further, it may be possible to distinguish whether the initial occurrence of a tribelet structure was the result of budding off as a result of population pressure, whether it was an indigenous development independent of population growth, or whether it was a competitive response to the development of tribelets elsewhere. I suspect that we have all three examples in the North Coast Ranges, paralleling the differential power, size, and diversity implied by Kroeber's analogous groupings of politically autonomous and territorially independent kingdoms, duchies, principalities, and free cities of early 19th-century Germany and Italy. We have an opportunity to study the development and spread of the tribelet in all of its various forms, over time, both with and without sociopolitical complexity.

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