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Aboriginal Indian Residence Patterns Preserved in Censuses and Allotments

Abstract. *Early reservation annuity censuses and allotment ledgers, analyzed in concert, allow identification of sociologically significant subdivisions of Native American tribes. Using this method, Southern Cheyenne* manhao *or "bands" can be located on the allotment map of 1892 as discrete clusters of individuals known by name, age, and sex. Measurement of linear distances among individual allotments of family members enables us to quantify jural rules of postmarital residence and confirms in a test case that the descendents of the bands at the Sand Creek Massacre in fact resided matrilocally.*

The Dawes Act of 1887 required Native Americans to select small individually owned allotments of land from the larger areas of tribal reservations. In selecting allotments, Indian people such as the Cheyennes of the American Plains exhibited patterns of choice which preserve for modern analysis their aboriginal social structure. By 1892, the Southern Cheyennes had selected 2132 allotments of approximately 160 acres each spread over 4 million acres in western Oklahoma (*1*). My first hypothesis was that the contiguity and spacing observed in the pattern of selected allotments represent the relationships then existing not only within extended families but also among kin-based political units called *manhao* in the native language. These units, which have been imprecisely described as "bands" or "clans" in English, consisted of approximately 200 to 800 persons each.

Discriminating between *manhao*, and *notxestozeo* or "military societies," also sometimes called bands, has been a classic problem in Cheyenne ethnography, and both the basis of organization of the *manhao* and the identities of their members have been widely debated (*2*). Although members of extended families are listed together by name, age, sex, and relationship on official allotment and annuity ledgers, descriptions of the larger units have been preserved only equivocally, in oral tradition and ethnographic accounts (*3*). Official rosters do not recognize these larger units, although they can be discovered from the rosters by a cybernetic control of this data, along lines of inquiry suggested by modern Cheyenne informants (*4*).

According to informants, and also according to historical accounts, extended families within the same *manhao* usually took their annuities together and also chose adjoining land allotments (*5*). If we analyze annuity lists, then, the consecutive ledger numbers assigned to individuals within a *manhao* should be closer than ledger numbers between members of different *manhao*. The locations of land allotments should also be instructive, since we learn from plotting family allotments on a map that members of the extended family took allotments together. Members of a *manhao* also can be predicted to have taken allotments together, as a group of extended families clustered on the allotment map.

A discrimination of hypothesized *manhao* from the allotment data is complicated, however, by the fact that some bands apparently took groups of allotments adjoining the allotments of other bands, with no space between them on a map of allotments (Fig. 1). But this problem can be solved by looking back at the annuity lists and subjecting them to an analysis in concert. In particular, I analyzed names appearing on at least two of the official annuity censuses of 1888, 1891, and 1895. The censuses were analyzed two at a time, with each individual identified by a pair of ledger numbers, each from a different ledger. Then these numbers were plotted as abscissa and ordinate for each person on Cartesian coordinates. On the resulting scattergram, not only did members of the same extended family appear as a small cluster of points, but clusters of families, the hypothesized *manhao*, began to appear. The individual land allotments of people in the same large group found on the map confirmed that these people all took their allotments together. By plotting each discovered "*manhao*" as a discrete unit, it was possible to identify the boundaries between groups which were contiguous on the map (Fig. 1) and to confirm that smaller groups of allotments were in fact single-band or single-*manhao* units. When an outline map of allotments arranged as bands (hypothesized *manhao* units) was shown to Southern Cheyenne informants in April 1979, they confirmed that these units were indeed the traditional *manhao*, and they supplied provisional names for the groups.

Although each Cheyenne band lived within the boundaries of the allotments taken by members of the band, an individual usually did not live on his or her personal allotment, according to government documents and modern informants (*6*). Nevertheless, the distribution of personal allotments strongly suggests that members of families, lineages, and bands took their land in patterns that symbolized their consanguineal, affinal, and political relationships to one another. When we assume that map distances can be taken as symbolic parameters of social distance, "kin closeness" can be quantified in miles and puts Cheyenne kinship studies on a firm data base. It is then possible to enter the classic debate concerning whether Cheyenne "bands" in the late 19th century were matrilocal, bilateral, or shifting from matrilocal to patrilocal forms as part of a general Plains emphasis on the importance of agnatic structures (*3*, *7*).

One problem of particular interest has been whether the Cheyenne camp attacked during the Sand Creek Massacre in 1864 was composed of *manhao* organized on matrilocal principles, in contrast to the patrilocal "Dog Soldiers" who had withdrawn to the northeast (*8*). The Sand Creek camps allegedly honored the matrilocal jural rule whereby "The people in each camp all belonged to the same clan" (*9*). It is now possible to test the actual matrilocality of these bands because of control of this early official data, and because of the recent collection by fieldworkers of genealogies of

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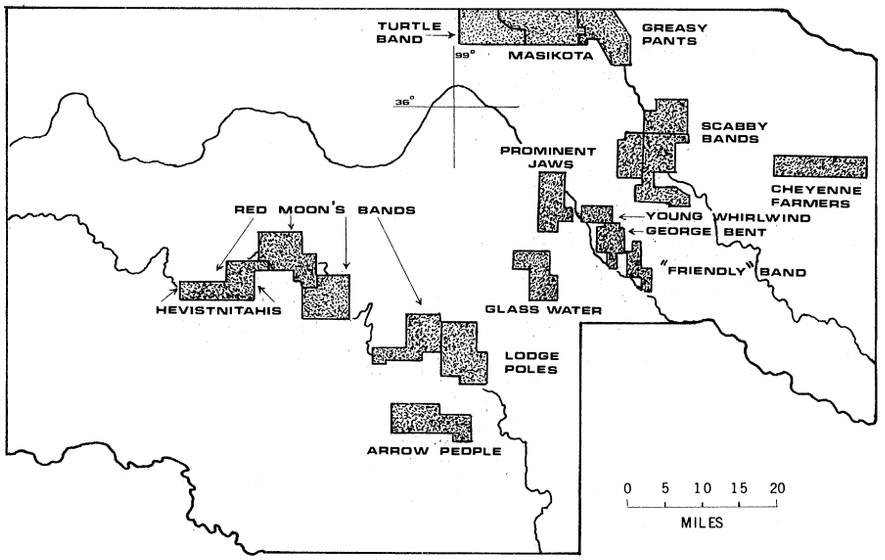

Fig. 1. Map of former Southern Cheyenne reservation area in Oklahoma showing locations of allotments selected by Cheyenne "bands" or *manhao*. [R. Bateman]

the descendents of the Sand Creek family heads.

To test for matrilocal residence, the allotments of married children of all Sand Creek family heads and spouses surviving until 1892 were found. For this illustration, the distance between allotments of mother and married child was used as a measurement of locality. With matrilocal choices, mother-daughter distances should be less than mother-son distances. Mothers rather than fathers from Sand Creek were selected to increase sample size, since many more women than men survived to take allotments. The death of some parents of offspring in the sample, however, does not permit discrimination between a truly neolocal residence and a residence with a spouse whose parents are deceased. It is impossible to discriminate, for example, between a man who always lived with his wife away from both sets of parents and one who lived originally with his wife's parents, although both her parents died before receiving an allotment. Modern informants tell us, however, that neolocal residence was "very rare" in this period, and occurred only among Cheyennes who had eloped or were employed by the government or by missionaries.

Dyadic distances between the allotments of mothers and married children were measured between the centerpoints of individual allotments (Table 1). Patterns of residence were determined by reference to 4.5 miles, the longest distance on a map between the allotments of any two individuals in any Southern Cheyenne extended family cluster. Distances less than 4.5 miles are called "near" choices, taken to comprise husbands' patrilocal choices and wives' matrilocal choices. Distances greater than 4.5 miles are called "far" choices, taken to comprise wives' patrilocal choices, husbands' matrilocal choices, and all neolocal choices, if any.

The data were categorized by sex of offspring and treated as a dummy continuous variable in a regression. Only 23.7 percent of the difference in distance was accounted for by sex, indicating that other explanatory variables should be introduced. The explanatory potentials of a near-far breakdown were explored by introducing the proximity variable (more or less than 4.5 miles) in a 2×2 contingency table (Fisher exact probability test, $P = .017$). A contingency coefficient of only .33 was obtained, however, indicating that categorization by relationship cannot strongly predict, nor be strongly predicted by, categorization by proximity ($\chi^2 = 4.58$, $P < .05$).

Collected genealogies indicate that the sample in Table 1 comprises approximately 23 percent of the marriages arranged for one generation by the Sand Creek group. From the standpoint of women, 14 out of 23 marriages or 60.9 percent represent matrilocal choices, while 39.1 percent represent patrilocal (near husband's mother and, presumably, father) or neolocal choices. From the standpoint of men, 3 out of 14 or 21.4 percent represent patrilocal choices (near their own mothers and fathers) while 78.6 percent represent matrilocal (near their wives' mothers) or neolocal choices. Although there are no shared standards among ethnologists about what proportion of matrilocal choices enables us to characterize the whole society as "matrilocal," this analysis indicates that the Sand Creek Cheyennes were predominantly matrilocal, and "uterine" in their general structure rather than patrilocal and agnatic.

The techniques being developed for the analysis of Cheyenne society are generally applicable to all cases in which census or allotment records are organized by consanguinity, affinity, or political alliance (*10*). The assignment of land allotments, especially, has been common among tribal peoples administered by English-speaking colonists (*11*). These allotment records, insofar as they show social distance, should prove invaluable for reconstructing social structures from earlier times. Such analyses put kinship studies on a firm and replicable empirical basis, in contrast to most ethnographic studies of kinship, in which fieldworkers merely report informants' opinions about jural or ideal patterns of marriage and residence. Especially interesting here is the opportunity to compare jural rules collected by field ethnologists, with actual practice as discovered from lists and censuses contemporary with field accounts.

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