1980

THE HUFF SITE A RECONSTRUCTION OF PAST LIFEWAYS

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Published in THE NEBRASKA ANTHROPOLOGIST, Volume 5 (1980). Published by the Anthropology Student Group, Department of Anthropology, University of Nebraska, Lincoln, Nebraska 68588

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A RECONSTRUCTION OF PAST LIFEWAYS

by

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Introduction

The purpose of this paper is to construct, from available literature, the possible social structure of the inhabitants of the Huff Site (32MO11). Although archeology is termed as the study of the human past, with its objectives being construction of cultural chronology, reconstruction of past lifeways, and discovery of processes that underlie and condition human behavior, I feel that many times these objectives are either overlooked or only in part covered. This paper will serve as an example of possible inferences which can be made from archeological and historical data. Some inferences or hypotheses which are made in this paper are admittedly speculative. I hope to encourage others to follow the example when reconstructing past lifeways and in discovering processes that underlie human behavior.

Environmental Setting

The Huff Site is located approximately one mile south of the town of Huff, North Dakota, on the west bank of the Missouri River. The site with its fortification ditch encloses an area of about nine acres. Water could have easily been obtained and the Missouri flood plain provided cultivatable fields.

The plains above the river bottoms were in the past the grazing grounds for bison and elk. Still found in the area are deer, antelope, rabbits, waterfowl, and fish.

The average growing season is about 121 days in length. The annual mean temperature ranges from 36 to 44 degrees fahrenheit (Wood 1967:7). In summer months one may see the temperature rise above 100^{o} F and in the winter see below-zero temperatures quite often. The annual rainfall is between 16 and 17 inches. Most of this occurs during the growing season, with nearly 75 percent concentrated between May and October.

It must be remembered that the aboriginals were not as dependent on climatic conditions as are modern farmers. Crops were well adapted to the growing conditions of the plains, as seen by their adoption by the early settlers.

Archaeological Background

The first extensive excavation at Huff was done by Thad. Hecker in 1938-1939. Hecker excavated the first long rectangular house (House 5, Figure 1) in North Dakota. Until this time people thought that there were no villages which contained exclusively long rectangular lodges.

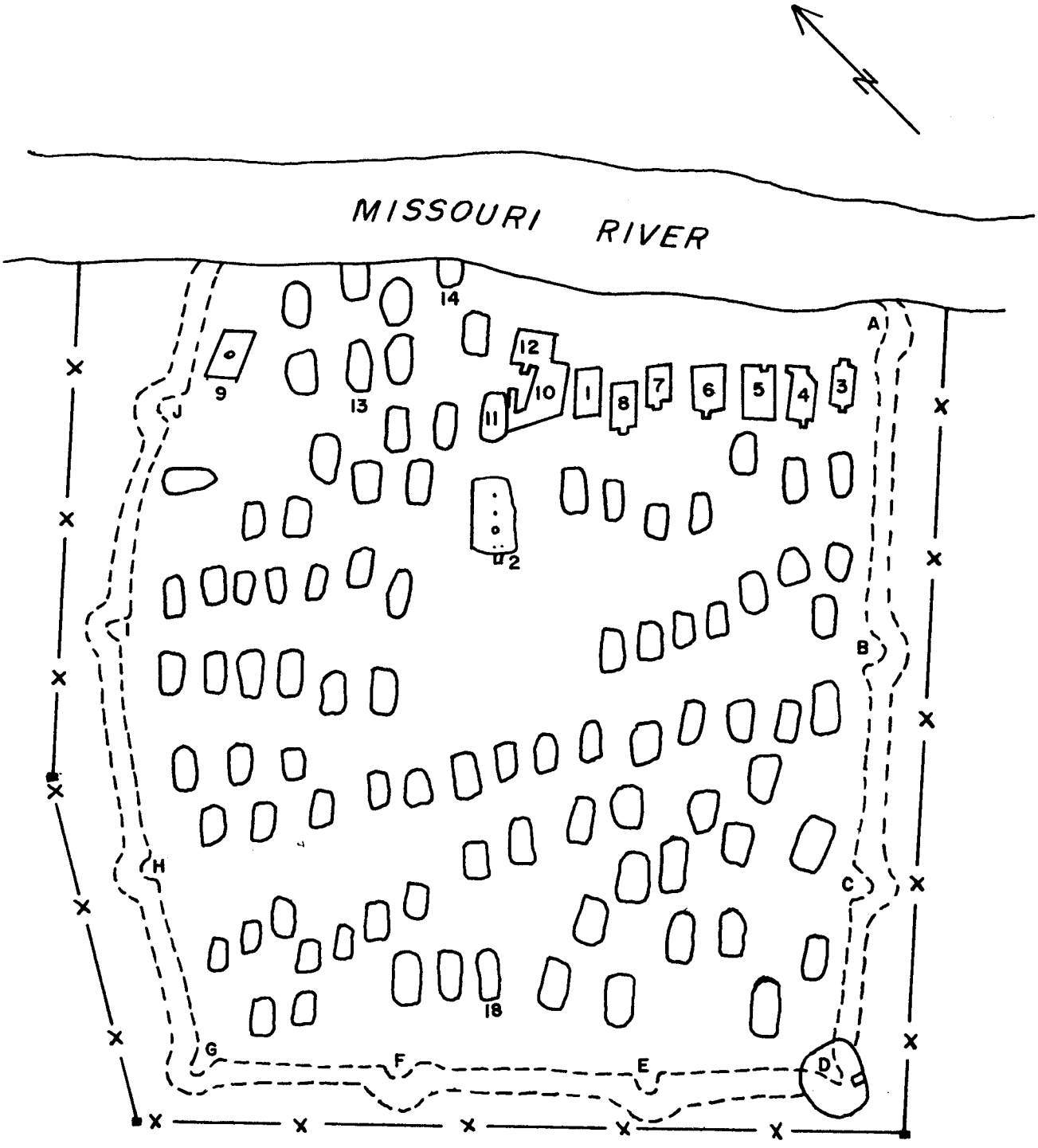

Figure 1. Map of the Huff site (32MO11). (Adapted from Wood 1967.)

The second excavations at Huff were in 1959 and 1960. James H. Howard opened four excavation units in 1959 (Howard 1959:11-15). The excavations included: House 1, House 2, Bastion D, and Bastion A (Figure 1). In 1960 the excavations at Huff continued under the direction of W. Raymond Wood. The excavations included: Houses 3, 4, 6-12, garbage pit, latrine pit, fortification ditch profile, northwest palisade line, southeast palisade line, test pits (east of House 4 and plaza area), mound test pit, and area stripped by road patrol (Wood, 1967:29).

Early publications place the Huff Site in a focus called either the Huff Focus or Middle Mandan Complex. In later publications a revised chronology placed Huff into the Terminal Middle Missouri Variant, in which it still remains (Lehmer and Caldwell, 1966:513).

Three basic factors have placed the Huff Site in the evolutionary line of the Mandan culture. These factors include: chipped stone tools, ceramics, and house/village pattern. The reader that desires a statement of Mandan cultural change through time should refer to the work of W.R. Wood (1967).

Tree-ring dating (Will, 1946:15-16) and Carbon-14 age determination has placed the age of the village between A.D. 1485 - 1543 (mean date of 1500 A.D.).

Aboriginal Subsistence

The subsistence base of the village inhabitants was river bottom horticulture combined with hunting, fishing, and the collection of wild vegetable products.

The importance of horticulture can be seen by the recovery of horticultural implements, the excavation of large storage pits located both inside and outside the houses, and the recovery of a charred corn cob fragment. Horticultural implements were common. The bison scapula hoe was the main cultivating tool. Several rough slabs with grinding depressions on one side were found, with manos in direct association. Another artifact connected with horticulture was a boomerang-shaped bone knife, often called a squash knife. La Verendrye, having had a box and a bag of presents stolen, reports that "the Mandan fort is provided with a great many cellars, fine for storing things in" (LaVerendrye 1927:328). Cellars no doubt refers to storage pits. Corn was probably the major crop. David Thompson noted while visiting the probable descendants of Huff (Mandan), that "they raise mostly Maize of the small red kind, with other varieties all of which come to perfection, with Pumpkins and a variety of small Beans" (Thompson 1916:231).

Hunting was undoubtedly an important economic activity of the village inhabitants. Horticulture was probably left largely to women, while the men devoted themselves to hunting and warfare (Meyer, 1977:63). The large number of animal bones of various species indicates that hunting was almost

as important as horticulture in providing food for the people. The bison, as one would expect, was the main animal hunted. Other large game animals represented include elk, deer, and pronghorn antelope. Smaller animal bones, such as beaver, were also found, but far from the minimum number of individuals represented by the larger game animals. The bones of birds, in particular eagle and crow, were also recovered from the site. These birds were probably hunted for a specific purpose. The time required to obtain the animal versus the usable amount of meat would be low in comparison to large game animals. It would thus seem feasible that birds may have been hunted to obtain specific items for use in ceremonies. Fishing appears to have been a minor activity of the village inhabitants. Only three fishhooks were found in the excavations. Fish bones were rare in house refuse, with catfish being the only species represented.

Excavations yielded no proof to support the idea of aboriginal gathering of root plants and fruits for supplementing the diet. I feel that with the presence of such exploitable resource there was gathering of roots and fruits. Juneberries, chokecherries, wild plums, feverol, and Indian turnips were likely to be among those collected (Will and Hecker, 1944:25).

The reconstruction of the social structure will include the social, political, and religious systems. Although the specific social structure is lost forever, a great deal may be inferred.

Social Organization

Let us first look at some inferences that will lead to a statement about the basic unit of the family.

The average house size at the Huff Site is 1048 square feet. Using this average and the information on native settlement populations presented in articles by Wedel, Naroll, and Cook and Heizer, one would expect an average household population of fifteen individuals (Wedel, 1979; Naroll, 1962; Cook and Heizer, 1968). The amount of variability seen here can be explained in part by the data used by each individual to derive his specific floor area vs. population formula.

Naroll (1962) uses eighteen tribes for population estimates, six of which are from North America. The six North American tribes are not from, or near the Great Plains. He also takes his information on floor areas from historic records. In very few cases do records specifically set forth exact floor areas.

Cook and Heizer (1968) worked exclusively with California Indian data. Single family houses were typically represented with six individuals per family. Like the case before, the data is from tribes that are not in the Great Plains area.

Wedel (1979) deals with the house floors of the Central Plains and the changes that occurred through time. He is dealing with archeological and historical records from a region in relative proximity to the site being discussed. I would tend to trust Wedel's approximation for the reasons previously stated. Using Wedel's estimation one would get nineteen individuals per house and 2210 individuals for the total village population.

As demonstrated earlier the inhabitants of the Huff Site were primarily horticulturalists, who supplemented their diet with hunting. Blumberg and Winch have substantiated the fact that "with increasing complexity of the pattern of subsistence, the proportion of societies with extended families increased from 17% among hunting and gathering peoples to 89% among those with agriculture and animal husbandry" (Blumberg and Winch, 1972:898, 919). The reader should note that although the previous statement was substantiated it is only part of the hypothesis put forth by Blumberg and Winch. The complete hypothesis is "that familial complexity becomes maximal at an intermediate point in the range of societal complexity" (Blumberg and Winch, 1972:898).

Excavation of houses at the Huff Site have revealed house floors with more than one fire hearth present. This may imply that an extended family did occupy a single structure. In occupying a single structure each nuclear family which made up the extended family may have converged on their specific fire hearth in their specific area of the house.

The fortification system of the site is one of its most striking features. The extensive defensive works of the village as compared with those of earlier villages has been interpreted as evidence of increased warfare (Wood 1967:14-15). A further discussion of the fortification system will be presented later in this paper. At this point it is sufficient to note the presence of a fortification system and the threat of external hostility. The reason for stating this is to set a base for predicting the type of residence system.

Ember, Ember, and Pasternak have hypothesized that with predominantly external warfare and a matri-dominant division of labor, a society will favor matrilocality over patrilocality (Ember, Ember, and Pasternak, 1974: 69-94). As stated earlier the presence of a fortification system demonstrates the fact of external warfare. A matridominant division of labor is probably the case at the Huff Site. The women did most of the work in regards to horticulture, which was the predominant source of subsistence. The women also prepared hides, cooked food, raised children, and owned and repaired house structures (Meyer, 1977:59-82).

Upon reading Lowie's presentation of Mandan social organization one would come to the conclusion that the Mandan had a Crow kinship system (Lowie, 1917). If this were the case, one would expect a matrilineal descent system. With external warfare the possibility of a male being killed would be higher than for a female. If the society were matrilineal the death of a male would not affect the descent line as much as if the society were

patrilineal. Matrilineal descent would help to provide a stronger bond of solidarity throughout the society.

In a brief summary of the family unit we find an extended family of approximately fifteen individuals per house structure. Descent is reckoned matrilineally, with the rule of residence being matrilocal.

Mandan informants in the late 1800's and early 1900's, stated that the Mandan had from 7-to-13 clans which were divided into moieties (Lowie, 1917). The Mandan society was also made up of a system of age-grade societies, which cut across clan lines (Meyer, 1977:73). From the archeological information on the Huff Site there is no way of telling how many clans or age-grade societies existed. The only possible archeological evidence to support clans or sodalities is the presence of fire hearths in the bastions (Figure 2). This may indicate the presence of a year round guard. If this is the case, a sodality or clan may have provided these guards.

Service stated "that external strife and competition among tribes must be the factor that provided the necessity for internal unity" (Service, 1962:104). It has already been shown that the inhabitants of Huff were threatened by external strife. Another important fact is that here we have a village of about 2200 individuals in an area of nine acres. Clans and sodalities would not only serve to reduce internal pressure, but could also be used to enforce orders and rules that would be needed for a concentration of people. Clans and sodalities probably did exist at Huff, for the purpose of village integration, security, and unity.

Political Organization

One of the first hints of some sort of political organization is found by looking at House 2 (Figure 1). This house has been interpreted to be the village ceremonial lodge because of its size and prominent placement with the entrance toward the village plaza. This structure was occupied by a prominent male of the principal clan and his family (Wood 1967:15, 36). Who was this prominent male? La Verendrye, upon entering the village of the Mandan, was led into the lodge of the principle chief. This lodge is stated as being "a large one truly" (La Verendrye 1927:327). Thompson makes a similar statement about the structure in which he was residing. He stated that it was one of the largest (Thompson, 1916:226-227).

La Verendrye's statement "principle chief" brings up the next point of discussion, numerous chiefs. In historic times village leadership was given to a council of bundle owners. Two members of this council were chosen as the war chief and peace (village) chief. The length of their term depended on the favor of the people. It should be noted that the chieftainship tended

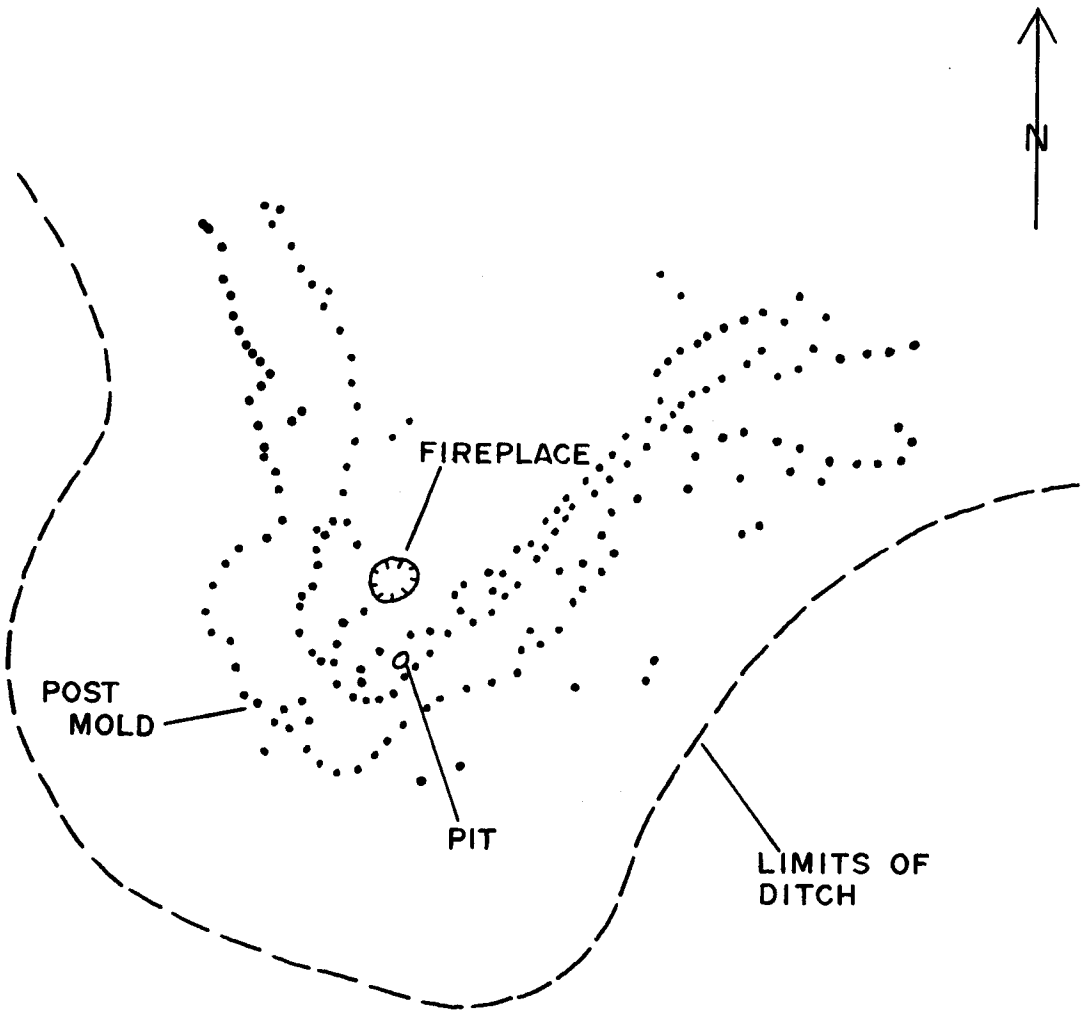

Figure 2. Plan of bastion (adapted from Wood 1967).

to be hereditary, because the sons belonged to the social stratum that enabled people to own important bundles (Meyer 1977:72).

The presence of a fortification system leads us to another inference concerning a political system. The fortification system is made up of three parts; ditch, palisade, and a sort of cheval-de-frise (Figure 2). The ditch ranged in depth from 2.5-to-4.5 feet and in width from 7.0-to-8.5 feet. Palisade walls were constructed of timber spaced about one foot apart. The cheval-de-frise consisted of sharpened timber placed at an angle toward the ditch. This system makes up three sides of the present site (approximately 600 yards). The organization/leadership and especially the labor needed to build this system must have been incredible, considering the tools of the time. After building was completed the need to maintain and man the system would have to be delegated to individuals or organizations. This delegation of duties was probably left to a leader or council.

The final inference concerning the political system is also relevant to the religious organization. Wood states from Catlin that "the houses around the perimeter of this plaza were occupied by officials of the Okeepa and other prominent men, and the entrances of the dwellings faced the sacred cedar" (Wood 1967:15) which was at the plaza center. Looking at figure 1 we note that the only house entrance facing the plaza is House 2. Does Catlin's statement apply to Huff? To answer this problem, I must first put forth information that is important to the solution.

First, Thompson and La Verendrye stated that the prominent chief lived in a large lodge. Here we see some link with lodge size and prominence. Second, the village had more than one chief and usually a council. The clans also had a prominent leader. Third, if prominent people didn't live around the perimeter of the plaza then their lodges would probably be indiscriminately located. Fourth, combining the first three, large lodges would be located indiscriminately throughout the village. Fifth, indiscriminate placement of the prominent proples lodges would form no distinct pattern with regards to plaza area.

Taking these statements into account I would put forth the following hypothesis. The further a lodge is located from the palisade, or conversely, the closer to the center of the village the larger the house floor/structure. If this hypothesis is true one would expect a pattern of large lodges toward the center; thus a discriminate placement. If the hypothesis is false one would expect no pattern; thus: indiscriminate placement of the lodges of prominent people, unimportance of location in regards to plaza, and probable lack of ceremonial importance of plaza area.

This hypothesis was tested by running an F-test (An explanation of the F-test can be found in Probability and Statistical Inference by Hogg and Tanis, 1977.) on the two variables: distance of nearest house wall to nearest palisade wall (feet). If there were a pattern in placement, then there would be a correlation number in the range of 0.5 and 1.0. The deci-

sion rule for this test was set at p_0.05 with degrees of freedom at 1 and 8. If F is greater than or equal to 5.32 then there is a correlation between the two variables.

It was found that the F was equal to 11.03, with a degree of correlation being equal to 0.76133. The findings point out that there is between 95 and 99.99 percent chance that the houses/lodges were not indiscriminately placed. The findings also show my hypothesis to have a high degree of correlation between variables. For those with a limited background in statistics the following discussion on correlation coefficients may be useful.

Correlation coefficients range from -1.00 to +1.00, with 0.00 signifying no relationship between the two sets of data. A correlation coefficient contains two pieces of information: the positive or negative sign of the coefficient and the magnitude of the coefficient. In interpreting correlations we look at the magnitude of the coefficient for information about the extent to which the two sets of measurements vary concurrently. We look at the sign of the coefficient for information on whether high or low values for one variable are associated with high or low values for the other variable. In our case the correlation coefficient is equal to 0.76133. This is a positive correlation. It means that the higher values on one variable tend to be associated with higher values on the other variable, and lower values are associated with lower values. The magnitude of the coefficient shows us that the variables have a moderate to high correlation.

From these findings we can state that at the Huff Site the houses around the perimeter of the plaza probably were occupied as Catlin has stated by prominent people and officials of the Okeepa ceremony.

Religious Organization

The search for the religious activities of the Huff inhabitants leads us once again to House 2. As stated earlier this structure is thought to have been the ceremonial lodge inhabited by the principle chief and his family. The size of this structure as compared to others is important in determining its function (Rapoport, 1969:10). The historic Mandan performed a ceremony called the Okeepa ceremony that was similar to the Sun Dance. One of the main differences was that the Okeepa ceremony took place in a very large lodge (Cash and Wolff 1974:7-10). It would seem that House 2 may have been used as an Okeepa ceremonial lodge.

If House 2 were still standing it would be on the edge of an open "plaza" which is approximately 160 feet in diameter. This open plaza, near the village center was usually used to gather the people for ceremonial purposes (Meyer, 1977:62).

The final inference that is related to religion is found in the placement of the lodges. Looking at Figure 1 we see that all but one lodge has the entrance facing a southwesterly direction. Figure 3 illustrates a speculated lodge (Wood 1967:103). The important features to note are; the central ridgepole, ridgepole supports, and location of the entrance. One conjecture as to the high percentage of lodges facing southwest can be inferred from the structures known as medicine wheels.

Medicine wheels are thought to have been used as horizon markers, to identify the directions of rising or setting of selected clestial bodies. A pole set vertically in a central cairn could serve as a foresight, which in conjunction with a backsight, would define the azimuth of the rising or setting of some important object. Work done at the Big Horn Medicine Wheel has shown the feasibility of this use as a celestial marker (Eddy 1974: 1035-1043). Looking at figure 4 we see the Big Horn Medicine Wheel. The important features are: cairn E, central cairn, and their alignment. Standing or sitting in cairn E (backsight) and looking at the central cairn (foresight) we would see the Summer Solstice sunrise on June 20-22.

Remember now the features of the Huff lodges. Speaking hypothetically; it's June 20 and we step out of a reconstructed Huff lodge. We then turn and sight down the ridgepole of the lodge (which serves as backsight and frontsight). The sun is not seen until it breaks over the back of the house, but when it does it's in the "sights" of the lodge.

It would seem feasible that the inhabitants of the Huff Site were using the Summer Solstice Sunrise for some purpose. The exact purpose is not known. The sunrise may have marked the beginning of a ceremonial period (Okeepa) or may have been used in some ceremonial function.

The religion seems not only to have been a community function but also an individual or family function. While excavating House 3 (Figure 5) an ochre stained bison skull fragment was uncovered (Wood 1967:37). The skull was probably part of a household shrine.

Summary

The Huff Site contains the remains of a horticultural based population of approximately 2200 persons. A concentration of this size within a heavily fortified settlement must have give rise to a complex means of social control and integration. The major remains of this integration is reflected by the fortification system. The presence of histility outside forces would support the idea of increased need for group solidarity. This paper has shown that solidarity was achieved at the tribal level by means of the Okeepa ceremony (presents of an open plaza and large ceremonial lodge) and by means of leadership given to specific persons of prominence.

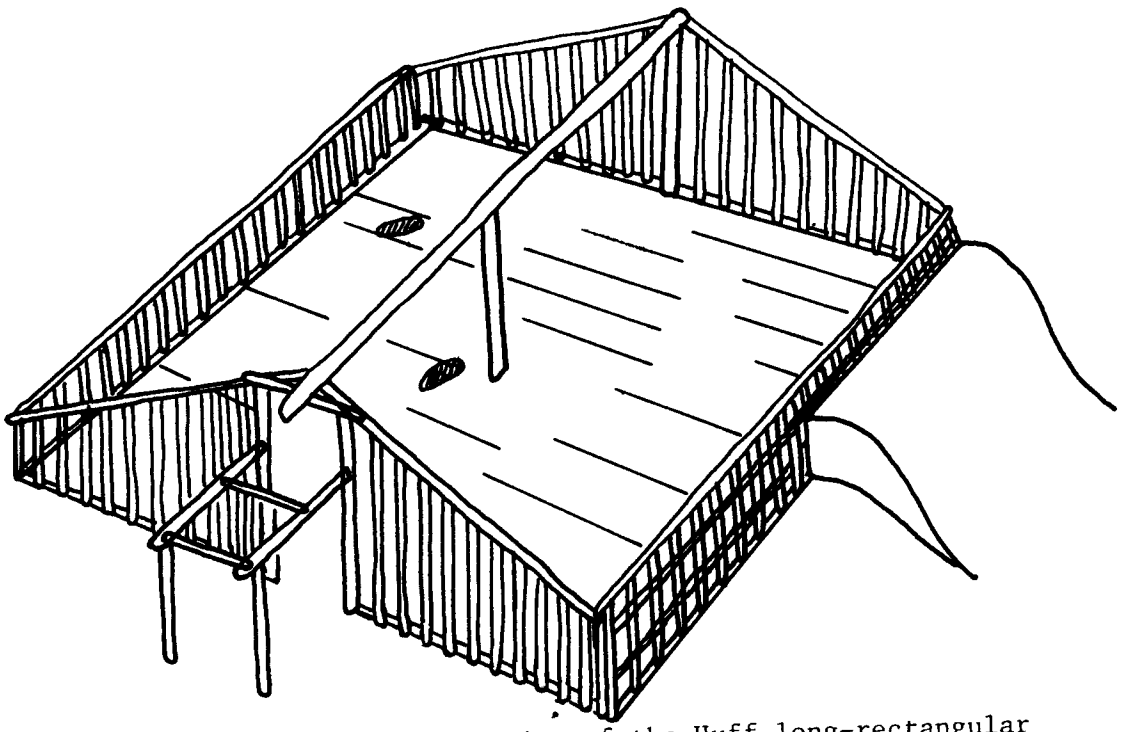

Figure 3. Speculative reconstruction of the Huff long-rectangular houses (adapted from Wood 1967).

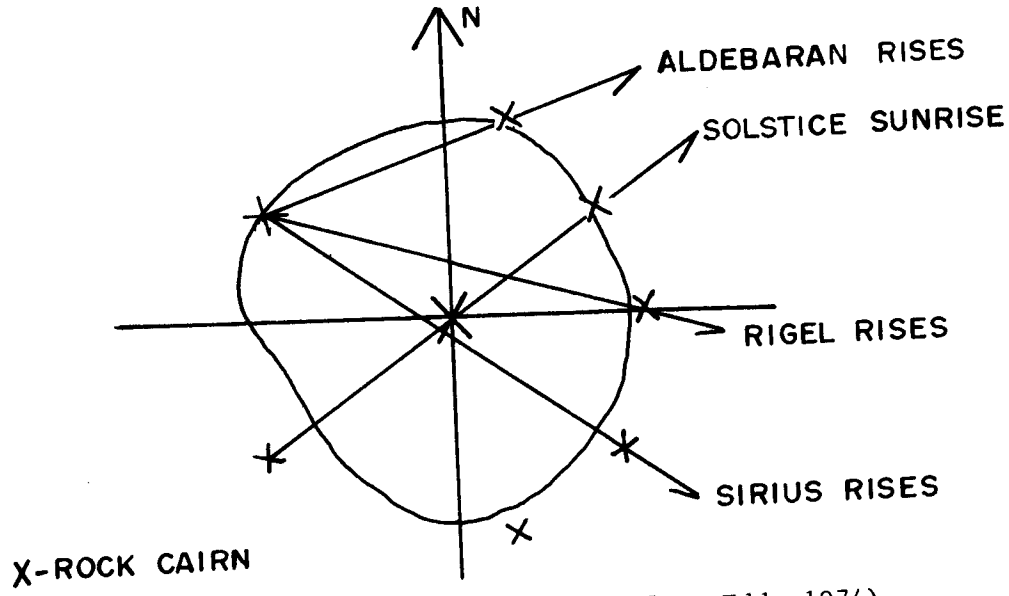

Figure 4. Big Horn Medicine Wheel (adapted from Eddy 1974).

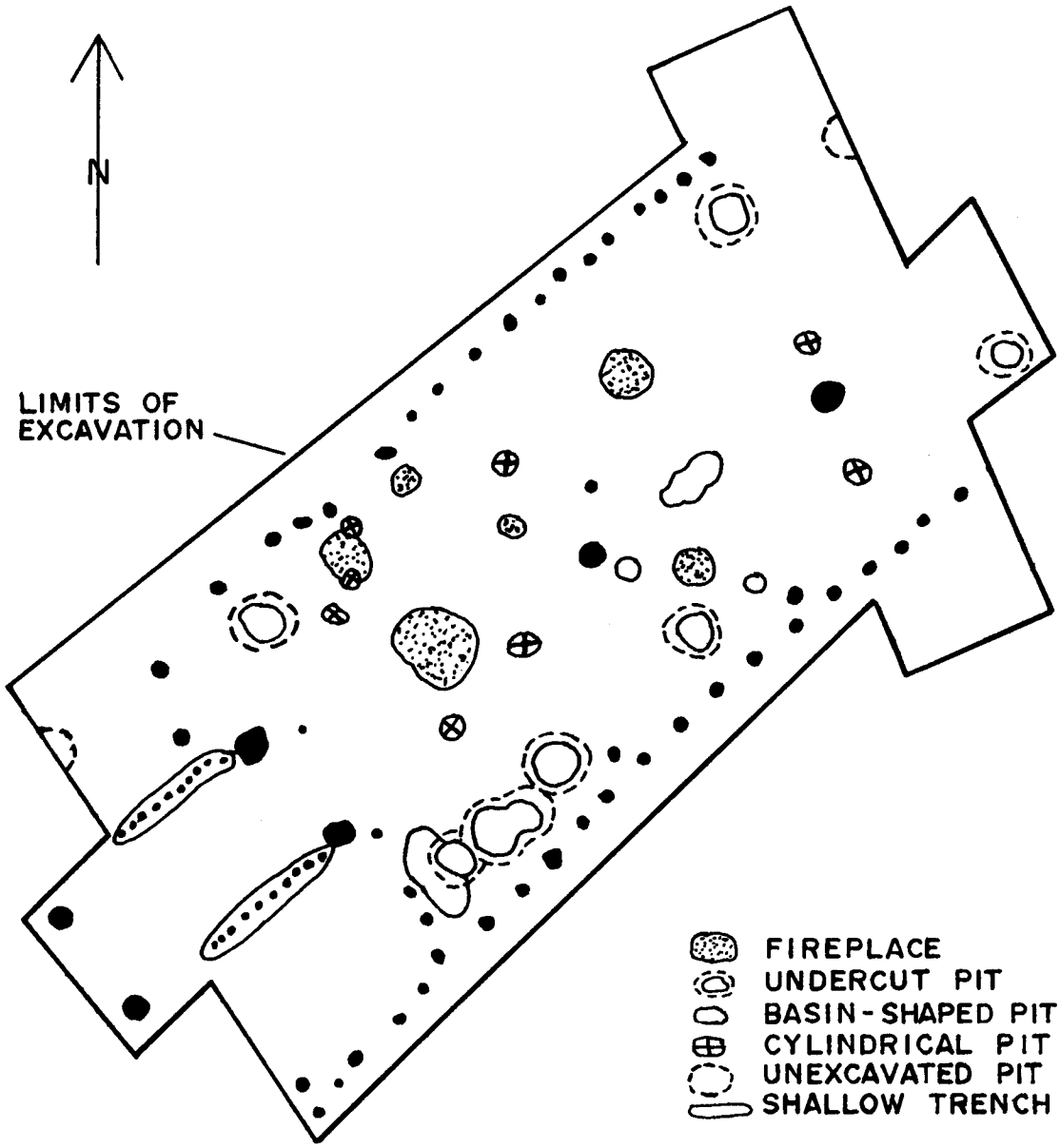

Figure 5. Plan of House 3 (adapted from Wood 1967).

At the family level this solidarity is reflected in the matrilineally extended family. The existence of clans and sodalities is also very likely, in light of external warfare and the need for an integrated unit.

In sum, the Huff site represents the integrated efforts of a tribe of people whose survival was dependent on the success of that integration.

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