Navajo Indians I

AN ANTHROPOLOGICAL STUDY
OF THE NAVAJO INDIANS

Florence H. Ellis

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fires because legend told that Navahos who ate meat from antelope captured in the last great drive here became ill and many died. This chute presumably would have been used about 1860. (Hough, 1915, p. 173.)

Movement as a Pattern in Economics:

A factor in distribution of a number of hogan rings per family is the Navaho custom of making several moves per year and building hogans or shelters even if a sojourn is to be brief. The early Navahos may have been few enough in number so that they could obtain all their food within a relatively short distance of their homes, though legend recounts repeated moves of a family seeking better hunting or gathering of desired foods. Hogans were built where the family stopped. In the historic period and today, Navahos have gone miles to areas where the pinons were plentiful in a certain year, as these trees produce only once in several years. A hogan or shelter is built at the pinyon camp, for the family travels as a unit and remains until the trees and the ground have been cleaned of the nuts - sometimes a matter running from September until January or February.

While the Navaho were without domesticated animals, village life was possible. Droughts affecting their farm crops and wild plant and animal foods or pressure from other tribes or the whites eventually might make a move of an entire group or even parts of it necessary. But when they had acquired sheep and horses and their flocks,

especially, had increased to the point of making it necessary for herdsmen to move them from place to place for forage, it became necessary for families to live farther from each other and, when drought struck, to move into whatever areas were enough favored by rains so that the sheep might survive. Possession of flocks of any considerable size began about 1700, the period when their population also was heavily increased by Pueblos fleeing from droughts in their own areas as well as taking themselves out of territory where encounters with the Spaniards would be necessary. The early 1700's seems to have been the period when many of the Navaho groups, with their recently acquired Pueblo increment, moved to the Chacra Mesa area and began spreading, as the century wore on, southeastward and southwestward from that center. Wherever they lived, it would have been necessary to take their flocks out from home quarters to feed, and the feeding grounds could not be close to their fields. A system of recognizing that a given group or outfit "owned" a certain piece of territory grew up: this is the system observable today - probably intensified by the limits of reservation life. The "outfit," consisting of several related families and sometimes even one or two which were not related but who formed part of a cooperating unit, farmed in the lowlands in the summer, moved to the higher wooded land in winter, and herded their sheep wherever grass was best. This arrangement led to living quarters being built in at least two locations per family, and each unit usually consisted of two or three hogans to

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accommodate mother and each of her married daughters and their children, as well as a sweat house at a little distance, and - sometimes a brush hogan which had been constructed for a curing ceremony, and a ramada. The Navaho did not necessarily remain at home to tend his farm plot; he could leave it alone or in the care of some member of the family or a friend while he went elsewhere, leaving a trail of shelters as he traveled, unless hurrying on the war path or other speedy mission. That building a hogan is not considered a major undertaking is exemplified in a recently observed situation (Evans Ranch, 1959) in which three Navaho workmen, hired to work for a rancher for three weeks, spent their first two days in building two solid winter-type hogans.

268 At the death of an occupant the hogan was burned or abandoned; even the timbers were not supposed to be used again. Navaho fear of the dead involves expectation of various personal ailments resulting from contact with a corpse or even dreaming of a departed relative. The concept appears to have been borrowed from the Tewa pueblos north of Santa Fe, where the modern archaeologist may find that his native workmen refuse to dig up or even to approach a skeleton uncovered in a ruin for fear of consequences. Many of the older men refuse to work on a project which may disturb the dead and hence be dangerous, and excavations involving disinterment may be blamed for bad weather during the following winter.

The Navaho either digs a grave inside the hogan for one who has died there, places body and possessions inside it, and covers it by burning down the hogan, or he carries the deceased and his possessions to a crevice or a cave at some distance from the home site and then returns to burn the hogan or to abandon it forever. The ghost presumably may return to it to take a friend or relative to the land of the dead to ease his loneliness. As Navaho mortality rates always have been high, each family may be expected to have abandoned a few hogans during the lifetime of any one inhabitant. The only possibility of saving the hogan is when a person, feeling that death is approaching, goes off (but rarely) into some canyon to die alone, or the family moves the dying person into an adjoining summer or medicine hogan, which later may be destroyed although the main dwelling is saved. 269

The custom of abandoning a death hogan has been a major factor in discouraging the Navahos from adopting the use of such solidly built homes as those of the Pueblos, or even homes constructed of planed lumber, a considerable cause for distress among some of their missionary-minded supervisors. It also has been a factor in leaving evidence of numerous hogan rings scattered throughout the area over which a single family has moved.

The Navaho, in herding at some distance from home, built his hogan or moved into one he had erected in some previous year. Hogan, corral, family, and flocks customarily made up a unit. Ostermann

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and a crop of corn, squash, and melons, even oats and wheat, raised on it, a Navaho settles down. His next door neighbor may live within sight or, perhaps, one, five, or ten miles away. Besides this, he may have another residence at the place where his herds of ponies and sheep are grazing, and, perhaps, still a third home among the timber, where he spends the winter with his family. Thus the greater part of them have two, some even three residences, where they stay at different seasons of the year. From this it will easily be seen, that in taking up a census of the Navahos, some will be overlooked while many others will be counted twice." (Franciscan Fathers, An Ethnologic Dictionary of the Navaho Language, 1910, St. Michaels, Ariz., p. 33.)

The tendency of the Navahos to multiply the structures utilized by a single family, without that family in any sense being nomadic, has been carefully pointed out by Kluckhohn, who explains that the horse made the Navahos mobile, but their shifting usually was confined to well defined areas.

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> Once a family had moved into a new region, one or more dwellings would be built in places which became fixed centers of family life for many years. While actual buildings were often destroyed or abandoned because of death or other reasons, the new ones erected would seldom be very far off. Within the range claimed by a particular family group, the number of desirable sites was limited by the necessity for protection from the weather and the scarcity of wood and water.
>
> Since agriculture was always the basis of the subsistence economy, it was necessary that at least one dwelling be close to the fields; during a large part of the year some of the family are anchored to plant, protect, and harvest the crops. Because the sections which could be farmed

profitably by floodwater irrigation and with Navaho tools were few in numbers, this factor also narrowed the choice of possible home sites. And so while some members of the family made extended journeys to hunt, to collect pinyon nuts or plants, to obtain salt, or to trade, and while individuals or whole families would move with the sheep into lower or higher altitudes at certain seasons, the Navahos were never 'nomads' for they always had fixed abodes.

The myth of nomadism has probably been reinforced by the undoubted fact that many families have 'winter hogans' and 'summer hogans' at some distance apart. For example, the population of the Dinnehotso valley is much greater in summer than in winter because the supply of wood for fuel is inadequate during the cold months. On the other hand, the farming opportunities are so much better in the valley than on the wooded tablelands that many families regularly shift back and forth between summer and winter establishments, which in some cases are as much as forty miles apart. (Kluckhohn and Leighton, The Navaho, pp. 7, 8.)

> ...Every Navaho establishment includes more than a single structure. Even a sheep camp has a brush corral for the animals as well as a windbreak or tent. At permanent residences there are corrals, "shades", and usually one or more storage dugouts. Out of sight, in the timber or in secluded hollow or rock cave, will be found at least one sweathouse, a small-scale replica of the old-stype hogan without the smoke hole. It is exceptional to have only a single hogan as the nucleus of a Navaho establishment. Two or more related families often reside in close proximity and there is at least one hogan or cabin for each biological family. More often than not, even an isolated family eventually builds two or more dwellings, one of which is used mainly for storage. (Op. cit., p. 45.)

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The greater number of families have more than one permanent establishment. The need for these is dictated by such factors as the desirability of getting the herds some distance from the croplands, the fact that grazing lands may be desirable in summer but unusable in winter because of too much snowfall, seasonal variations in water supply, and availability of wood for winter fires. Some families who possess a thousand or more sheep have

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fifteen buildings. Relative position of ownership of units within the family group remained constant over periods of several years. In addition to the clusters many of the kin groups had one or more smaller, rough and temporary establishments or camps at various distances from their larger clusters of buildings.

....Usually the dwellings were local variations of the basic Navaho hogan.... In addition to the hogans, at most clusters there were small, rectangular, one-roomed log cabins, with gabled earth-covered roofs and packed earthen floors.... A few cabins and hogans were built with walls of logs or sawed "slabs" laid vertically rather than in the more usual horizontal fashion. At least one cabin was built of stone, and another of adobe. Cabin doors always faced eastward.

The clusters usually had one or more food storage structures--either hogans without smoke holes, cabins, or root-cellars with earthcovered gabled roofs. Stock corrals, too, were usual, often several for horses and others for sheep and other livestock. Sometimes they were made of barbed wire on wooden posts, or entirely of loosely laid logs. Some were simply "brush corrals," of cut untrimmed trees laid in a square or oval. A number of these structures of all types were adjoined by a small shelter or shed, where fodder was stored or animals sheltered during heavy winter weather.

Most of the clusters included "shadow hogans" or "shades." These usually consisted of a framework of poles covered periodically with fresh tree boughs, although some of the structures were mere waist-high enclosures of rough boughs and untrimmed logs....

The preferred locations for the house clusters and most of the single establishments were in groves of pinyon trees or on the edges of plateaus that overlooked canyons or shallow valleys. There was wide variation, however, for the land which a kinship group had did not always include a good housing site. Some clusters were rather scattered, including hogans as much as a mile from the central site.

An integral part of the more permanent house clusters was the cultivated fields that were scattered in cleared spaces between and around the groups of buildings....

Most of the smaller establishments away from the more permanent house clusters were associated with grazing activities. "Herding hogans" were scattered throughout the districts habitually used for sheep range, usually situated near some water source, each with its nearby corrals and perhaps a "shade" for cooking. One such location would be picked by a cooperating group for use during the lambing season in early spring; another for the shearing season a little later; others would be used when the flocks were grazing in a particular district. Usually, these buildings were rougher than those of the more permanent clusters. Frequently, they were abandoned to fall into ruins, or their timbers were used in the construction of new buildings elsewhere in the neighborhood. There seemed to be constant change in the particular establishments that were occupied although relative distribution remained stable. Sometimes, buildings were not used during a season but were returned to in later years. Of nine herding hogans that were said to belong to one large cooperating group and were in usable condition, only three had been used during 1941. There were many more abandoned structures in various stages of dilapidation in the district.

Instead of herding hogans, temporary "sheep camps" during warmer weather were sometimes used while the herds were grazing away from the permanent installations. Usually these camps consisted of one or perhaps two manufactured cotton tents (although some camps had no tents) sometimes a simple waist-high "shade" for the cooking fire, and a wooden barrel for water, and were maintained in one location for most of a summer....

It must not be thought from the above description that there was any great standardization of Navaho settlement types.... Only the addition of planted fields would have made some of the herding hogan establishments into "permanent" locations, and some of the permanent clusters had two or three buildings and only a single field while others had up to fifteen buildings and a dozen fields. Some of the larger kin groups had two or even three permanent clusters of establishments. At times, such a large kin unit would erect a whole group of hogans, for the performance of a special chant which would never be used again.

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> For religious reasons the building which an individual was occupying at the time of death was permanently abandoned and sometimes burned. Two entire clusters of establishments and fields were abandoned when an influential and rich married pair died within a short time of each other....
>
> Other abandoned structures were relics of lice infestation, strokes of lightning, remainders of past land conflicts, or evidence of the depletion of surrounding range land. Some were marks of changing kinship alliances. It would have been very difficult to have attempted to describe local Navaho population distribution or settlement composition from the evidence afforded by the fixed living structures in 1941. It would even have been difficult to make the description from the buildings occupied at any one time.

From Landgraf's data we have the figure, then, of 15 permanent Navaho establishments equalling 60 residents, or 4 per establishment of 1 to 3 buildings in contemporary use, plus herding hogans, hogans erected for a ceremonial and then abandoned, and dwelling
284 hogans already abandoned because of a death, lice infestation, lightning striking nearby (a great source of supernatural danger according to Navaho belief), land conflict, range depletion, etc. The families of each cooperative kinship group build their permanent hogans in the arrangement of a cluster of from 2 to 15 buildings, but we must understand that the term "permanent" does not mean permanent as used in relation to Pueblo dwellings; Landgraf notes abandoned structures falling into ruin within the same district of group or band use. Consequently the number of archaeological hogan sites of a period should be divided by a factor very conservatively stated as from 3 to 5 (his 2 to 15 buildings plus herding sites, etc.) to obtain

the number of Navaho families, and then multiplied by Landgraf's figure of 4 persons per establishment to obtain an approximate number of Navahos within the area at that period. The number of sites, then, approximates the number of individual Navahos who lived in the area. It may be argued that Navahos perhaps built fewer structures per family in the past than at present, when building materials are more easily obtained, but it can also be argued that in the past (post-17th century) Navahos moved about more often because of Ute raids, engagement in raids upon Pueblos and whites, and intermittent warfare in which they were engaged alone or as temporary Pueblo allies against Spaniards, Pueblos, Mexicans, or Americans. The census of Navahos at Ft. Sumner, December 1, 1864 (Plaintiffs' Exhib. 355), gives the number of lodges as 1276, the number of families as 1782, and the 285
total census of persons as 8354. This gives 8354/1276 or about 6-1/2 persons per lodge and only .7 lodge per family, by which we can conclude that at least two families (presumably biological families) lived in most lodges and that the number of persons per family (presumably biological) must have been closer to three, as an average, than to six. The scarcity of wood at Ft. Sumner was one cause of complaint, and this as well as the matter of misery loving company, probably was responsible for more than customary congestion in hogans. Dittert (Ms. cit.) used the figure of 3.5 persons per hogan in computing a total of 840 persons living in the Navaho Basin between 1698 and 1775. "During this time period there were approximately 4

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generations, assuming a generation lasted 20 years. This figure divided into the 840 total population gives a figure of 205 persons per generation. If we assume an average of 2 generations living at any one time, we get an average population in the reservoir of about 418 persons or about 18 persons per square mile. However, if we assume that each family built at least a summer hogan and a winter hogan during each 20 year period, this would cut our population estimate in half to 205 persons, or less than 9 persons per square mile.

"This latter population density is still several times larger than that published by Kroeber (1939, Map 18) for the Puebloan area (75' per 100 KM^2). This would suggest: (1) The Navajo figure is too high due to more hogans being built by each family than has been estimated or fewer than 3.5 persons per hogan; (2) the puebloan average is taken for the entire puebloan area which includes much submarginal farming land. The Navajo reservoir lands are along a major river drainage, and therefore are better than the puebloan average for farming and thus able to support a higher population." (Dittert, Ms. cit.)

Navaho expansion of territory, as time passed, was not totally the result of their increasing population. They were being ever more heavily pressed by an ever-increasing number of whites, as well as by other Indians, Comanches, Utes, and Apaches who themselves were being displaced by whites. They also were suffering the problems of increasing numbers of dry years and concomitant increasing soil

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lamination and arroyo cutting. It would be ridiculous to think in terms of a one to one relationship between Navaho families and number of hogans located for any specific period, and equally ridiculous to think of the land requirements of a Navaho family today as representative of the requirements of an equal unit one or more centuries back, before the longest drought since that of 1276 to 1299 and the worst land overuse recorded in the Southwest brought Navaho territory to its present sad state of erosion and waste.

Movement as a Pattern of Flight from U. S. Troops:

When the problems of depredation by the Navaho and Apache upon white people and pueblos reached a peak with the droughts of the 1860's and the native knowledge that the United States troops were involved with the Civil War, it was decided that incarceration of both Apaches and Navahos in some area at a distance from their home territory was the best solution for all concerned. The Apaches were rounded up and placed there first, and as soon as this task was completed, the troops went out to gather in all Navahos who did not come to give themselves up within a given brief period. As the army men expected, when the winter weather struck, on top of a period of drought and knowledge that the troops were destroying hogans, fields, orchards, and flocks, many came in. But some did the opposite; they fled to the distant outskirts of Navaho land, as they had known it, and when the troops approached in pursuit, they went even farther into new country not previously occupied and in some cases at this time

occupied only briefly, until the troops moved on or the people decided to hide elsewhere or even to give up hiding and give themselves up before they starved. The stories of old Navahos give accounts of families moving here, there, and elsewhere, like frightened birds. Only a few such tales ever have been collected from Navahos, but from these few one may quickly satisfy himself that this situation must be kept in mind in relation to hogan remains in western and northern peripheral areas and to those toward the White Mountains of Arizona. The same caution, of course, pertains to accounts mentioning encounters with Navahos at this period or later. And stories of the distance covered within a few months or a year under the conditions of fear and flight are not indicative of length of family moves during a comparable period under normal circumstances. Examples of this type of material will be given in discussion of "Flight into Peripheral Areas."

SUPPLEMENT:

Hogan Types in Specific Areas

Hogans - Canyon de Chelly and del Muerto:

Number: More in general area than in any other one locale (Mindeleff, op. cit., p. 483). Also the area has been continually occupied for a very long time. In this area there has been a strong emphasis on farming which influences the number of permanent habitations.

Types: The old type here differs from the forked-stick. Prior to 1863, there were semi-pit structures dug into the ground about 1' to 2' deep. The walls were low, of undressed stone, and roofs were cribbed or made with parallel beams. Note, however, that in Coyote Canyon there have been found old de Chelly type hogans without pits (Page, op. cit., p. 47).

Hogan types - New Fort Wingate Area:

Three main types:

1. Forked-stick.
2. Hogan of poles with south and east sides vertical and roof flat.
3. Hogan of plank boards with all sides vertical with mud in the cracks. Roof gabled.

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often be abandoned for several seasons before the Navaho would return to use them (op. cit., p. 50).

Ramah Area - Study of Specific Households: A, B, and C.

A and B: During the period of study, these households had two shelters each. Both had horse corrals with pole bar entrances. Sweat houses were used in each location and both also had one sweat house that was not in use.

B and C: These both had two cabins and a one-roomed log cabin used for storage. Here also temporary tents were used with a shade or brush entrance.

A and C: People here lived in brush shelters as well as log hogans and had as well a second brush shelter for auxiliary use when sings were held in the hogans.

A: Storage facilities - the only auxiliary storage space was a small open structure in the horse corral. Mr. A. had contemplated a stone structure and worked out rough blocks from the ledges near the log hogan (Roberts, op. cit., p. 42).

B: One hogan to be lived in with a roof of sawed boards laid on log rafters. All earth covered. Summer hogans with cribbed roofs supported by posts. Slab lumber for walls. During sings some brush shelters used as dwellings.

One frame cabin with two doors and two windows. Used for living or storage. Also for storage was one log cabin and one log hogan. The latter was used for hay storage.

Two horse corrals, the one near the log hogan used for hay storage.

Also 5 sweat houses - 2 used currently (Roberts, op. cit., p. 43).

C: Old Hogan, cabin and new hogan all close together. The cabin is 12' by 10' in area, 6' 8" high. Brush shelters of oak branches occupied frequently - 2 in number.

The corrals are near the cabins. They consist of a horse corral, and a sheep corral. The latter is built with logs and boards and filled in with brush.

There are no sweat houses on this site.

Navaho Shelters in Ramah Area:

Many local variations of basic Navaho hogan. As late as 1941 most buildings had no windows and there was only one replacement of the smoke hole with a stove and stove pipe (Landgraf, op. cit., p. 47). General arrangement - smoke goes from floor to the hole. Doors are rectangular and face east.

Buildings other than hogans in most clusters: Often small rectangular one-roomed log cabins with gabled earth-covered roofs and

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packed earthen floors. Some cabins and hogans of vertical log walls or sawed slabs - not horizontal as usual.

Food storage structures: one or more per cluster of buildings. Like hogans without smoke holes or cabins or root-cellars with earth covered gabled roofs (op. cit., p. 50).

Stock corrals: for horses and sheep. Made of barbed wire or loose logs and brush. Often with a small shelter or shed for storing fodder or sheltering animals nearby.

Shadow hogans or shades: These are in most clusters. Built with a frame of poles covered with fresh boughs. Some only waist high. Might have utensils, benches, weaving looms or water barrels inside (op. cit., p. 50).

294 Locations preferred - pinyon groves or edges of plateaus. Good housing sites not always available however, and often clusters are scattered.

Hogan Types in the Chaco-Corbett Area: (Corbett, Op. cit., pp.103-106)

This area includes a strip of land 20 miles wide extending from 30 miles north of Chaco to 20 miles south. 150 hogans were checked in this area. No forked-stick, sweat, or Yebicai hogans were found.

1. Square stone dressed hogans: These had flat roofs of boards or beams. Often they had more than one window besides the usual door.

2. Square hogans of wood: These were made with vertical timbers chinked with adobe. Roofs were flat and of wooden beams covered with bark and adobe.

3. Round hogans of rock and adobe: This type is the predominent type in the area. These are of rock masonry with adobe mortar. The outer face is smooth, often dressed. The roofs are of cedar beams which interlock. Doors are of planks or blankets.

4. Hogans of wood and adobe with no stone: Forked sticks are placed in a circle and support the roof. The walls are of vertical sticks, the roof cribbed. It is chinked with branches and adobe.

5. This type of hogan is round, and it is constructed of horizontally laid timbers right to the top, the wall and roof merging in a continuous curve to the top.

6. Summer ramadas of the usual type.

7. Exceptions: - one two-roomed structure with walls of vertical sticks chinked with adobe plaster.
   - one of stone with doors, windows, fireplaces and chimneys.
   - one "L" shaped.

295 There seemed to be no correlation between the available Chaco materials and those of the hogans. That none of the old conventional types have been found shows that hogan types are rapidly changing. The one consistent feature was in an always eastward facing door.

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of the tree, and hence probably the cutting date of that specimen because erosion does not make an even cut over an entire circumference. The publication of the rechecked southwestern dates appeared in 1951, with explanation of why this very extensive work had been felt necessary. The work also included an examination of the application of dates to sites: how many southwestern sites might be considered to show poor dating, good dating, or conclusive dating, wholly on the basis of tree ring dates available for consideration re a site. Smiley explains, on this subject of such importance to all who utilize tree ring dates:

> Much can be said concerning the number of dated specimens for a site. For the purposes of this paper it suffices to say that some normal ratio between the number of specimens and the size of the site should be noted. For example, ten specimens from a small pithouse are considered to be good indications of the date on that structure; whereas ten specimens from a large pueblo the size of Pueblo Bonito in Chaco Canyon are only poor indications of the date when the entire structure was erected. Again, however, this remains a matter of interpretation for the archaeologist. (Smiley, 1951, p. 9.)

Considering that a pithouse and a hogan are not far from the same size and that the hogan contains more wood than the pithouse in original construction, it would appear that ten dated specimens from a hogan might be considered to have adequately dated that hogan--provided the ten gave outside dates no more than a year or so apart from each other. Unfortunately, the majority of hogan remains (other than those of the post Ft. Sumner period and 20th century) have provided no date whatsoever. A small number have provided a single date and a

very small number more than one, and of these few fall within a close range of each other. Almost all are from pinyon, of which almost all have eroded exteriors and hence do not give cutting dates.

One of the most difficult problems involved in dating Navaho structures, even when wood from those structures produces tree ring dates, is the reported old Navaho custom of burning down their timber for such use. The Navaho made some stone implements of their own in the Dinetah phase, but even then they picked up and used many implements left by Pueblo or pre-Pueblo peoples in the area they occupied. This we know from the types of stone work found in artifact assemblages for Navaho sites of this phase. As time passed, they apparently made less and less in stone implements and picked up more. Stone axes, which they apparently did not make, were considered of great value when found on some prehistoric pueblo ruin; one statement is that a Navaho considered a stone axe as valuable as a wife. Obtaining wood for hogan-building by means of burning off the butts of pinyon or juniper trunks would have been very much easier if the coals were applied to dead rather than living trees, whether the coals were heaped at the base or placed in an axe-cut groove a short distance above the base. Those of us who live in the Southwest and customarily burn pinyon logs in our fireplaces are well aware of the virtual necessity of obtaining wood from dead trees or wood which has been cut and well seasoned, for the freshly cut pinyon from living trees almost will not burn without addition of kerosene or large

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at CM 15, and single oval units with masonry hogans at CM 13 and 38. (Vivian, op. cit., pp. 61-72, 72-78.) CM 2 was a fortified butte top with masonry hogans built upon it, and CM 4 a complex of forked stick and masonry hogans. The double and single oval units were more poorly constructed than in the preceding period and in less secluded and less defensible positions, suggesting less stress of fear among the inhabitants. Double and single oval units were becoming less popular and smaller. Most of the structures were built upon the first bench above the canyon and near its rim. CM 13 was on an isolated butte with some fortification walls and CM 2 was a typical fortified butte. Ovoid structures were rare by the latter part of this phase. Masonry hogans seem to have appeared for the first time on the Chacra (possibly inspired by the masonry oval puebloid units), sometimes

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built upon an earlier site, sometimes on talus slopes, and sometimes between large boulders or partially under an overhanging ledge. Cliff edges were favored. Keur noted the same type of location for masonry hogans on Big Bead Mesa. The cribbed roof may not yet have been present in this period. There is no definite evidence for it.

The Cebolleta Mountain Navaho are represented at Big Bead Mesa, Chato Mesa, and sites as far south as the Agua Salado. (Ellis, Laguna-Acoma Land Claim Paper, 1960.) On Big Bead Mesa, three masonry hogans, two forked stick hogans, and possibly the room adjoining the fortification may have been built in the early years of Hall's Cabezon Phase, although that room, with an indefinite date of post 1712 on a

specimen with exterior eroded away may actually date post 1775, the date for the high fortress wall to which this room was attached. Of the masonry hogans, one (#88) gives the date of post 1724; the second (#90) gives a date of post 1738, and the third (#92) gives one date of post 1673 and another of post 1721. The building date of two forked stick hogans (#94, 95) is post 1725 and post 1729. The degree of exterior erosion on all of these specimens makes it impossible to say more than that the date of the structure in which they were used undoubtedly was appreciably after the date given for last remaining ring on the "dated" wood specimens, possibly in the 1740's. Although selection of Big Bead Mesa as a defensive site (cliff walls edging the mesa) may have been made slightly before 1750, to judge from hogan dates, the laborious building of the unusual masonry wall came sometime after 1775, probably as the result of continuing fear of Utes or of Pueblo and Spanish reprisals during a period of heavy Navaho raids. Lagunas tell of Utes sweeping down to attack the Laguna Pueblo village of Paguate some miles farther south in the 1700's; they killed or drove off all the horses. The stronghold site to which Pueblo Indians, militiamen, and two squadrons of soldiers chased a group of Navahos after repeated raids and attacks on Pueblos and Spaniards in 1774 has been identified by Reeve as the heavily fortified Big Bead Mesa site (Reeve, 1960, pp. 200-235).

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Sixteen Big Bead hogan sites produced wood dating somewhat later, all but one with badly eroded exteriors, for which cutting

HP019685

LATE NAVAHO SITES:

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Dated Sites: 1868-1900

Sisnathyel Mesa				
#63 Hogan 1	1889cG	Few	1890
#65 " 1	1889c	"	1890
#66 " 1	1880+	?	1890
#67 " 1	1889cG	Few	1890
#68 " 1	1884+G	"	1890
Chacra Mesa			
#28 Masonry hogan 3	1888	ca. 5-20	1899
#29 " 3	1895	ca. 1-5	1899
#30a " 3	1898	ca. 1-5	1899

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Salado			
LP 435	1868c	0	1868

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LATE NAVAHO SITES: (cont'd)

Area	Sites	Last Dated Ring	Estimate of rings missing from exterior	Approx. probable building date of structure
Hopi-Navaho Contact Area				
Burnt Corn	(Group B) A	1868 G	Few	1868
	(Group C) A	1868 G	"	1868
		1868 G	"	1868
	(Group U) A	1869 B		1869
		1868 G	0	1869
	(Group K) A	1870+G	Few	1870
Hooshdodito	(Group C) A	1869 inc. G	"	1869
		1869 inc. G	"	1869
		1868+G	"	1870
		1870+G	"	
		1872 inc. G	"	1872
Middle Jeddito	(Group G) A	1864+G	"	1864
		1878+G	"	1878
	(Group H) D	1876+G	"	1876
Doyaneada	(Group R) A	1869 inc. G	"	1869
		1875 inc. G	"	1875
	(Group Z) A	1871+G	"	1871
	B_1	1873+G	"	1873
	B_1	1874+inc. G	"	1874
	(Group B) B_1	1898 G	"	1898
		1900+G	"	1900
Middle Polacca	(Group D) A	1893 inc. G	"	1893

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HP019686