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AN ETHNOHISTORICAL PERSPECTIVE ON CHEYENNE DEMOGRAPHY

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ABSTRACT: *Administrative censuses of the Southern Cheyenne Indians from 1880, 1891, and 1900 permit family reconstitution, identification of residence groups, and comparisons of fertility between monogamous and polygynous women, when the records are approached by ethnohistorical methods. This approach includes an awareness of the aboriginal adoption practices, kinship system, and naming practices. It is argued that the biases and distortions of administrative records can be effectively corrected to add to our store of information on band and tribal societies.*

Demographic studies of band and tribal societies are important because such societies represent the population parameters and social structure of approximately the first two million years of human existence (G. Isaac 1981). Regarding methodologies for studying the demography of such peoples, Neel and Chagnon (1968, p. 680) have said that "the approaches to understanding the demographic structure of our remote ancestors are chiefly two, 1) the study of skeletal remains from extinct societies and 2) intensive studies of the scattered, surviving groups of so-called primitive man." To these we should now add a third: an ethnohistorical methodology emphasizing the study of historical censuses of tribal

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societies under the administrative control of a dominant society (Moore 1980).

The ethnohistorical approach is different from the field ethnographic approach in that we begin with a database, such as a tribal census, which we know is distorted by the ethnocentrism of the database authors, the administrators and agents of the dominant society. But by using ethnological accounts describing cultural practices which are contemporary with the database, and augmenting this by interviews with the modern descendants of the enumerated tribe, we can significantly improve the quality of the data and the reliability of demographic conclusions.

A wealth of administrative documents exists which might be analyzed for demographic purposes. In North America alone, the health and census records of the Bureau of Indian Affairs constitute thousands of feet of shelf space in national, regional, and local archives. The colonial archives of the European powers are even more extensive, comprising a hundred or more years of rosters, enrollments, conscriptions, and tax schedules. Ancient empires also can be expected to yield some tribal censuses. China took its first comprehensive national census, including national minorities, nearly two thousand years ago (Durand 1960).

Despite the potential of such administrative records, scant attention has been paid to them until recently (Campbell 1987, Carroll 1975, p. 3; Dobyns 1983; Henige 1986; Moore 1987; Reff 1985; Roth 1982; Trimble 1985). The primary reason for this has been the continued assertion that these records contain unique and insurmountable methodological problems. In her overview of native American demography, Johansson (1982) echoes similar concerns, stating that native American demographic data are defective and inadequate, making any straightforward description, analysis or synthesis next to impossible. Such an assertion is not new. Over two decades ago, Petersen noted (1961, p. 339) that "population data concerning . . . primitive societies are of a completely different order . . . It is not merely that population size, structure, movements, and so forth must be inferred from indirect evidence, but also these statistics are often incomplete and biased."

Such strongly articulated caveats, however, have apparently not discouraged those who have wished to use tribal censuses for the analysis of demographic change. During the last decade, a number of important studies have appeared (Burch 1980; Caldwell, Caldwell and Caldwell 1987; Dobyns 1983; Hammel and Howell 1987; Harris and Ross 1987; Howell 1979; Thornton 1987; Ramenofsky 1987; Zubrow 1976). And while the problem of incompleteness in these records has been effectively addressed by Meister (1980), some additional attention needs to be paid to Petersen's other concern—cultural bias.

The assertion that cultural and inter-cultural biases inhibit sophisticated demographic treatment of tribal census data is certainly correct, but we should note that the demographic data collected by field ethnographers is also sometimes distorted (Ray and Roth 1984; Chagnon 1974, pp. 88–124; Peters 1974; Neel 1978). Informants frequently misrepresent biological facts to field-workers and to each other, as well as to agents of the dominant society. Whether the bias in field genealogies is more or less significant than that of early historical tribal records has been investigated by Morrill and Dyke. They conclude that while both databases contain discrepancies, the historical record is more accurate (1980, p. 3–4). Still, the fieldworker has the advantage of being able to do additional interviews, if advisable, while the ethnohistorical demographer does not have the luxury of discarding one database to look for a better one. In many cases, imperfect or biased census data are all that exist, and the researcher must develop techniques of dealing with them if anything at all is to be learned about a tribal society in the documented period.

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To deal with the specific and unique difficulties presented by each tribal census, it is tempting to follow the example of researchers who work with field genealogies of tribal societies, simply mining the censuses for fundamental demographic facts and trends, and then creating elaborate simulations using such programs as SOCSIM and AMBUSH to fill in the missing profiles and vital rates (Weiss and Smouse 1976; Howell and Lehotay 1978; Hammel et. al. 1976). While we endorse this general idea, we will argue here that a great deal more can be done toward improving the database created from historical tribal censuses, if one has a basic ethnohistorical knowledge of the tribe in question. If one knows the structure of the "exotic" kin terms used by census respondents, and if one is aware of unusual marriage, residence, and adoption practices, substantial corrections can be made to the raw schedules. Such improvements not only allow important demographic characteristics to be calculated directly, but also allow the formulation of much-improved computer simulations.

In sum, we argue that the distortions usually observed in tribal censuses are not random or arbitrary, but are structured, regular, discoverable, and correctable. This article has two purposes, then: first, to exhibit some of the demographic parameters of aboriginal Cheyenne society, as discovered from improved censuses; and, second, to demonstrate some techniques which might be used to approach administrative records of other tribal societies. The results we will present, while somewhat independent of one another, are nonetheless interrelated through the pervasive endocultural Cheyenne concepts of 1) adoption and 2) kin extension. Our results primarily concern analytic matters of 1) fertility, 2) age-sex structure, and 3) family composition. The methodological problems we will address specifically include 1) nominal linkage, 2) age distortion, and 3) real parentage.

In great part, we offer this analysis in the spirit of increasing collaboration, noted by Howell, between the anthropological and demographic traditions (1986, p. 222). She recalls an earlier time when "anthropologists invented their own concepts and measures and reviewed one another's papers for publication without benefit of the demographic community, while demographers consulted anthropologists occasionally on questions of obtaining rapport in the field but not on questions of measurement or the implications of demographic findings for social structure, kinship, or other subjects of interest to anthropologists." We present here, with apologies to the mathematical sensitivities of our demographic colleagues, certain well-established ethnohistorical and ethnological concepts which we think can improve a tribal database for the purpose of demographic analysis.

THE DATABASE

Three of the most useful Cheyenne censuses were taken (1) in 1880, using a special questionnaire prepared by the Bureau of American Ethnology; (2) in 1891–1892, in preparation for allotment in severalty, which was the individual apportionment of trust land; and (3) in 1900, when Indians were questioned in the regular U.S. Census about migration and children ever-born. There are other administrative censuses taken in the intervening years, but they contain much less collateral information and are therefore more difficult to link. Our three benchmark censuses mark the best opportunities for nominal linkage across the first two decades of reservation life. Although these documents have been elsewhere described and criticized in some detail, we nonetheless list below some of the characteristics salient to our purposes (Moore 1980, 1984, 1987).

The 1880 census of Southern Cheyennes and Southern Arapahoes (enumerated separately though forming one administrative unit) is one

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of perhaps three such U.S. Indian censuses which survived a later housecleaning of records at the Bureau of Indian Affairs.[1] Now archived at the Oklahoma Historical Society, the census is not only the earliest comprehensive survey of Cheyennes by age and sex, but is also the most sensitive to native cultural categories. For example, the respondents had the opportunity to state a native-language personal name and its translation, their vocation (e.g., arrow-maker, wood-carrier, medicine man) and the extent of polygyny in the family. At that time, the dominant society had not yet begun to press Cheyennes into schools, prevent polygyny, control ecology, or forbid the native religion, and consequently the Cheyennes had not yet learned to conceal those aspects of their culture which were under scrutiny. This is reflected in the official correspondence of the period, also preserved in the Oklahoma Historical Society archives.

The non-Indian enumerators of the 1880 census took as their basic social unit the "family," which they understood to be everyone in the same "lodging," described in the questionnaire. In all cases, Cheyenne families were listed as living in tipis, pointing to their general aboriginal condition at that time. In addition to stating their age and sex, respondents were asked to state their kin relationship to a "head of family," usually designated by the enumerator as the eldest male in the tipi. These relationships were then translated and appear on the schedules as standard English kin terms, sometimes connected descriptively as, for example, "wife's mother" or "son's wife."

Each "family" was enumerated and questioned separately in a form of three pages. The families were seriated as interviewed, and a serial number was entered on the first page of the schedule. Unfortunately, not all of the schedules have survived, as can be seen from discontinuity in the numbering (Moore 1984, pp. 292–293). The schedules of approximately 116 families are missing; 262 are preserved in entirety.

The special census of 1891 was taken in preparation for allotment in severalty, and the 1892 listing is nearly identical, comprising people actually allotted. The 1892 list is the more important, as it includes for each person an official allotment number, name, age, sex, relationship to a designated head of family, and a legal description of the land allotted. The 1892 census is continuous, however, rather than by household, although households, for most purposes, can be taken as beginning with each new head of family.

The 1892 allottees also received an "office name," which, along with the allotment number, became official in the eyes of the Bureau of Indian Affairs. From this point on, office names were carried on as surnames by the Bureau, and "heirship files" were created for each allotment, with the original allottee as the apical ancestor. To carry surnames in such a file, for example, an original allottee named "Big Horse" might be listed as having children named Bob, Jim, and Edna Big Horse, without regard to the traditional names of the children (Moore 1984, pp. 301–303). The Cheyennes seem to have cooperated in creating these office names, and they have continued to preserve them in relationships with the dominant society at the Bureau, at school, and in subsequent censuses.

The 1892 list also contained a statutory description of the land allotment, by range, township, section, and quarter. Because the Cheyennes were choosing 160–acre allotments from a huge area of trust land in western Oklahoma, they tended to select clusters of allotments in areas with the best water, grass, or timber. Thereby they preserved in the census the memberships of the traditional bands, since band members took contiguous allotments, separated from the allotments of other bands (Moore 1980, 1987, pp. 210–218).

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In the 1900 U.S. Census, the authors of the special Indian schedules were greatly interested in matters pertaining to fertility, migration, and intermarriage. Native Americans were asked their state or country of birth, and those of their parents. They were asked about their number of living children, children ever-born, and whether they were involved in a polygynous marriage. By this time, however, the respondents had become circumspect about reporting polygyny (if in fact the institution had not actually declined), so that the spouses reporting multiple marriage in 1900 were fewer and older.

The respondents were also asked to state their tribal membership, and whether they had any ancestors who were members of other tribes or were non-Indians. This was in line with the increasing interest of the Bureau in the matter of "blood quantum," an idea which was, we should note, invented by the Bureau and not by the aboriginal culture. As in previous censuses, all respondents in 1900 were asked to state their kin relationship to the head of the family. Like the 1892 census, the 1900 listing is continuous, with the notation "head" punctuating the column containing kin relationships and dividing it into households.

For nominal linkage, the watershed of difficulty is the census of 1892. Linkage is difficult before that time because Cheyennes, especially men, maintained multiple names and normally changed them several times during their lives. Women are difficult to link because so many of them bore the same name (Moore 1984, p. 301). But because of the unique nature of the 1880 census—taken in a period when the Cheyennes were close to an aboriginal condition, containing native cultural categories, and involving cooperation from the informants—we have gone to great lengths to link that census with the allotment census of 1892, and hence to subsequent censuses using office names. To achieve this difficult linkage, we have located a large number of collateral documents to determine alternative names of people. We have consulted government records, the standard historical sources, and especially the ethnographic notebooks of early field-workers from the Bureau of American Ethnology (Moore 1987, pp. 27–51). We have collected field genealogies which comprise over 3,000 persons descended from the ancestors of 1880. To help with the alternate translations of Cheyenne names, a name dictionary has been created with the help of modern Cheyenne-speakers. This helps link a name such as *Heshkovizenako*, which might legitimately appear as "Porcupine Mother" on one list and "Angry Bear" on another, these translations reflecting confusion in meaning and orthography. ("Porcupine" as an adjective means "angry"; the words for "mother" and "bear" are both transcribed in the same way, with Roman letters, as *nako*.)

The small size of the 1880 census—1456 persons—has also encouraged us to use exhaustive methods. Linkage was achieved essentially by comparing families, rather than individuals. We discovered that if we used for linkage criteria 1) possible alternate translation of names in the family, 2) explicitly stated kin relationships, and 3) the approximate individual and relative ages of family members, and if we used the criteria in concert, we were much more likely to link a person than if we used each criterion independently, rejecting the link if it were uncertain (Skolnick 1973). But if we found "Small Woman" in 1880, aged twenty-eight and with a son named Burnt Pot, we could link her with some certainty to "Little Woman" in 1892, aged forty-three and with a son named Black Kettle. Each of the three criteria independently, however, would not be enough to achieve a convincing linkage.

A disadvantage of using criteria in concert, though, is that we can assign no mathematical certainty to the probability of a particular

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linkage or to the reliability of a statement like "seventy percent of the population has been linked." By the loosest of criteria, we have achieved complete linkage between 1880 and 1892. But by the tightest of our three fundamental criteria—1) nominal, having the same Cheyenne name; 2) chronological, having an age within three years of that dictated by the time between the censuses; and 3) genealogical, having the same family structure after accounting for deaths, births, and marriages between the censuses—we have linked fewer than twenty percent of the 1880 respondents.

For linkages which are less than certain, we have no way of weighting nominal criteria as against chronological or genealogical criteria (Skolnick 1973, pp. 112–116). Consequently, we must select appropriate criteria and an appropriate tightness depending on what we wish to achieve by linkage. Extremely tight nominal criteria, for example, were used to ascertain residence patterns of same-sex siblings (Moore 1980; 1987, pp. 251–285). Looser criteria have been used when it was necessary to have a larger or wider sample. For example, in comparing the fertility of bands, there might be two candidates from 1880 for two linkages in the same 1892 band. For purposes of comparing band fertility, it does not matter which woman is which, since both would be included in the same subset. In all cases, however, it is important to state the criteria explicitly, so that the work can be replicated, even though no statistical significance can be easily attached to the criteria.

THE TOTAL POPULATION

The first indisputable documents noting the existence of a Cheyenne nation consist of French maps from around 1700 (Moore 1987, pp. 77–83). In the seventeenth and eighteenth centuries, however, Indian groups in the Plains and Great Lakes areas were undergoing various kinds of reorganizations and ethnogeneses, and there were many hybrid groups that were ambiguous with respect to national identity (Bishop and Smith 1975, Tanner 1986). But by the time of the Lewis and Clark narratives in 1804, the Cheyenne nation had coalesced into a group comprising "1,200 souls."[2] By 1816, William Clark had revised his estimate upward to "2,000 souls,"[3] while Schoolcraft estimated in 1847 that there were 2,500 Cheyennes (Schoolcraft 1847, p. 523). From the historical and ethnohistorical evidence, it is not clear how much of this increase was due to population expansion, and how much was due to differences in enumeration techniques or the incorporation of additional bands into the Cheyenne nation.

The first thorough enumerations of the Cheyennes took place in the early reservation period, beginning about 1869 for the Southern Cheyennes and 1877 for the northerners. In 1877, most northerners and all southerners resided in the Oklahoma Territory, comprising a total Cheyenne population of 3,264.[4] By 1880, the Northern Cheyennes had withdrawn to their own reservation in Montana, leaving behind a total of 2,102 Southern Cheyennes.[5]

Before dividing this total population into bands and families and making comparisons for demographic characteristics, we should first look at demographic trends in the total population, the general population parameters, and possible sources of error, especially regarding our three touchstone censuses of 1880, 1892 and 1900. At this point we emphasize the two earlier censuses, since they were taken closer to the aboriginal period and are more likely to represent aboriginal conditions.

Regarding one possible source of error—age heaping—Figures 1 and 2 represent the extent of heaping in the 1880 and 1892 censuses. In 1880, the tenth percentile seems most affected, for reasons unknown. In 1892, the decile years seem rather uniformly affected, except for 15–25. Collateral government documents indicate that this was the targeted age range for various government programs, especially schools.

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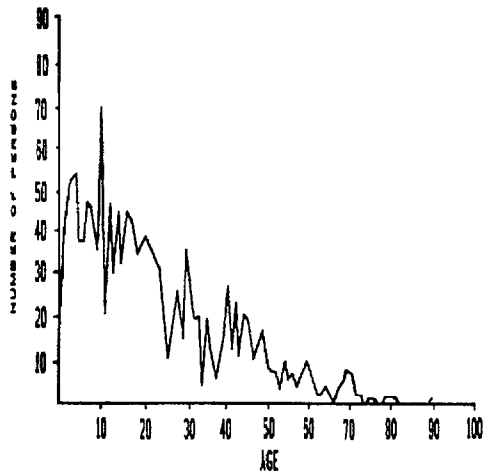

Figure 1. Age Heaping on the 1880 Census.

Therefore we surmise that respondents in this range were more likely to know their ages, and to have their real ages recorded in official documents.

Since Cheyenne culture grants high status to elderly people, we might expect the censuses to reflect an exaggeration of age. To check for age distortion, we developed a special sample of thirty-seven persons (twenty-seven males and ten females) who appear on all three benchmark censuses (Table 1). For linkage, we used the 1891 pre-allotment list, rather than the 1892 list of allotments, because the former contained more information for linkage. We used very strict nominal and kinship criteria in these links, requiring that all three linked entries for one person bear at least an alternate literal translation of the same Cheyenne name, from the standpoint of native lexemes. That is, Black Kettle will link with Dark Kettle but not with Burnt Kettle. Red Wolf will link with Bloody Wolf but not with Fire Wolf. Strict genealogical criteria were also employed, so that no entry was linked which had contradictory genealogical information. That is, allowing for births, deaths, and marriages, all relatives in the household must be consistent among all three censuses, using the same strict nominal criteria to identify relatives as to link Ego.

Figure 3 shows the extent of age distortion for the strict sample, with age predicted from the earlier census plotted as the ordinate against

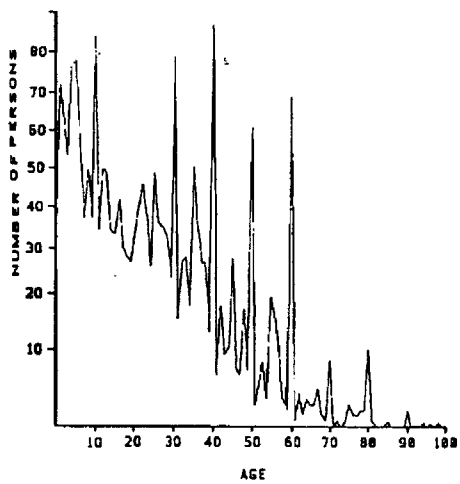

Figure 2. Age Heaping on the 1892 Census.

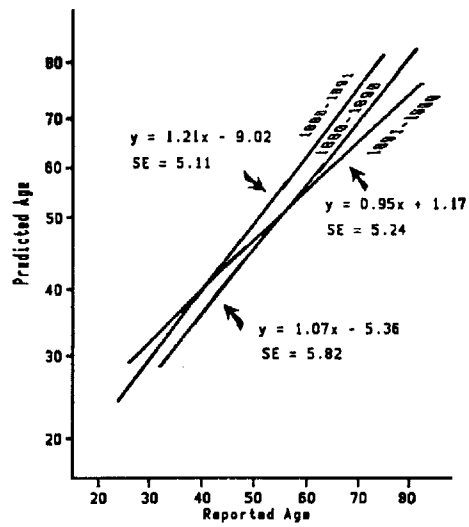

Figure 3. Age Distortion from 1880 to 1891 to 1900.

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age recorded for the same person on a later census. In all three cases, a straight line provided the best fit using least squares, although we think a polynomial curve might have resulted from a larger sample. Judging by collateral documents, we believe that 1880 is the most accurate census, and the lines derived from that census exhibit less distortion, with the eleven-year span (1880–1891) reflecting less distortion than the twenty-year span (1880–1900). The

Table 1
Strict Sample Linked from 1880 to 1891 to 1900.
Predicted Ages Compared to Listed Ages

	Sex	*Age 1880*	*Pred. 1880*	*Age 1891*	*Pred. 1880*	*Pred. 1891*	*Age 1900*
American Horse	M	12	23	28	32	37	38
Apache (Man)	M	13	24	29	33	38	30
Big Head	M	11	22	22	31	31	31
Big Knee	M	21	32	29	41	38	38
Black Hawk	M	25	36	39	45	48	48
Blind Woman	F	50	61	55	70	64	63
Buffalo Meat	M	34	45	43	54	52	54
Crane Woman	F	16	27	39	36	48	57
Dancing Woman	F	44	55	49	64	58	72
Drunkard	M	31	42	50	51	59	52
Frog Woman	F	14	25	30	34	39	39
Left Hand	M	41	52	55	61	64	64
Left Hand Bull	M	46	57	55	66	64	75
Little Hand	M	21	32	41	41	50	51
Little Horse	M	26	37	44	46	53	52
Long Neck	M	34	45	37	54	46	50
Loving Woman	F	19	30	32	39	41	38
Old Woman	F	63	74	79	83	88	82
Ponca Woman	F	30	41	29	50	38	45
Porcupine	M	13	24	29	33	38	38
Prairie Chief	M	28	39	36	48	45	47
Red Hat	M	10	21	26	30	35	31
Red Leg	M	17	28	25	37	34	35
Red Lodges	M	45	56	59	65	68	69
Red Woman	F	34	45	37	54	46	55
Rising Elk	M	41	52	50	61	59	70
Shave Head	M	43	54	50	63	59	59
Shell Woman	F	16	27	33	36	42	39
Spotted Horse	M	42	53	52	62	61	65
Standing Bird	M	20	31	26	40	35	36
Stone	M	18	29	34	38	43	40
Sun Maker	M	13	24	28	33	37	37
Tobacco	M	24	35	35	44	44	45
White Spoon	M	23	34	34	43	43	43
Wild Cat Woman	F	49	60	50	69	59	52
Wolf Belly	M	36	47	48	56	57	70
Wolf Robe	M	35	46	45	55	54	53

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line derived from the two later, and, we believe, less precise censuses (1891–1900), represents the most exaggeration between predicted and recorded ages. Standard errors are shown on the figure; coefficients of determination were 0.82 for 1880–1891, 0.83 for 1880–1900 and 0.86 for 1891–1900.

Keeping in mind the extent of age heaping and the seniority distortion measured above, we are ready to look at the general structure of the age-sex pyramid, and at vital rates. A comparison of the 1880 and 1892 censuses, in particular, should enable us to gauge the magnitude of change in vital rates during the near-aboriginal period (Coale 1957). In examining the 1880 census, however, we should remember that there are missing schedules, although it is whole families which are missing. But despite these gaps, the surviving schedules should not be biased by age or sex.

Figure 4 shows the 1880 age-sex pyramid, indicating an expansive population, with a large proportion aged fifteen or less. The deficit of females and excess of males in the 10–14 cohort deserves some comment. We suggest that this anomaly exists because the cohort was born during the period (1864–1869) of most intense military conflicts between the Southern Cheyennes and United States troops (Grinnell 1915). The sex differential reflects selective mortality during these conflicts, as well as a preference for male children during a time of military stress. The remainder of the population structure appears relatively normal, given the stochastic fluctuations inherent in small populations.

Despite the female deficit for the 10–14 cohort, the sex ratio for the total surviving 1880 schedules is 98.23, which falls within the normal range of 95–102 for most populations (Shryock, Siegel and Associates 1976, p. 107). By contrast, the sex ratio of the 1892 census, illustrated in Figure 5, is 86.4, showing a marked deficit of males. In this period, the Cheyennes were subjected to several epidemic diseases with significant mortalities.[6] Although the diseases in question, primarily measles and influenza, have no sex-specific mortality, there were sex-segregated local schools which might have experienced differential incidence, and

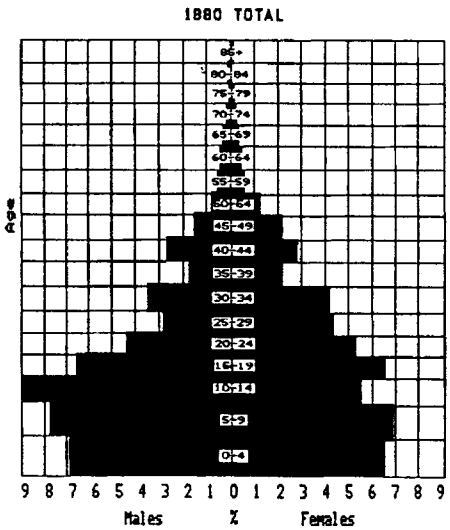

Figure 4. 1880 Age-Sex Structure.

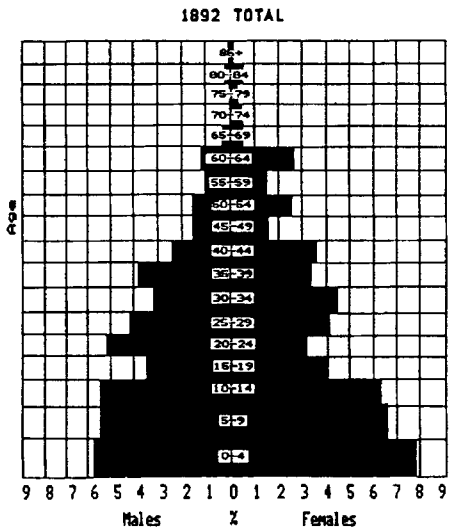

Figure 5. 1892 Age-Sex Structure.

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hence sex-specific mortality (Marcy and Kibrick 1977, p. 692; Berlin 1980, pp. 361–362). The actual reports, however, are very sketchy.

Table 2 provides an indication of the magnitude of change in age-sex structure between 1880 and 1892. In the Table absolute census numbers are distributed by five-year cohorts and converted into percentiles. The Table indicates significant population loss in the cohorts younger than age fifty, and especially younger than twenty. This structure is consistent with medical reports of age-specific deaths among children in the early reservation period. Corroborating this indication of the effects of childhood mortality is a comparison of the 1892 and 1880 pyramids themselves. The later pyramid shows a marked restriction below the 20–24 age cohort, the portion of the population

Table 2
Change in Cheyenne Population by Age Cohorts, 1880–1892

AGE	Population		Change	
	1892	*1880*	*Amount*	*Percent*
0–4	292	417	−125	−42.80
5–9	258	452	−194	−75.19
10–14	252	446	−194	−76.98
15–19	160	406	−246	−153.75
20–24	183	301	−118	−64.48
25–29	177	221	−44	−24.85
30–34	167	238	−71	−42.51
35–39	153	118	35	22.87
40–44	133	173	−40	−30.07
45–49	68	118	−50	−73.52
50–54	83	63	20	24.09
55–59	54	38	16	29.62
60–64	73	32	41	56.16
65–69	18	21	−3	−16.66
70–74	14	13	1	7.14
75–79	14	2	12	85.71
80–84	15	2	13	86.66
85+	8	2	6	75.0
Total	2,122	3063	−941	−44.34

which was less than ten years of age during the epidemics of the 1880s. Against this background, we will next consider how the trends might have been differentially reflected in band and family structure. In general, we wish to ask the fundamental question whether all the bands were merely demographic microcosms of the whole, or whether there were significant differences among them.

DIFFERENTIATION INTO BANDS

In the first half of the nineteenth century, the Southern Cheyennes of Colorado drew apart from the Northern Cheyennes of Montana, and the southerners organized themselves into chief-led units mobilized for the developing trade in buffalo skins and robes (Moore 1987, pp. 191–204). As warfare with the United States intensified in the 1860s Southern Cheyenne society polarized further into a peace faction, led by the trading chiefs, and a war faction, led by the headsmen of the soldier societies (Moore 1974). These factions persisted into reservation times, and can be discovered by plotting the locations of land allotments from the 1892 census (Moore 1980).

Figure 6 represents an attempt to identify the bands and subbands of the early reservation period. In those cases where the data are contradictory, the membership of each band is best determined from geographical location rather than from the order of names on the allotment census. Collateral documents indicate that not all members of a geographical band necessarily took their allotments at the same time and received consecutive serial numbers, although all band members ended up with contiguous allotments. We did find, however, that the smallest consecutively numbered social units on the census corresponded in almost all cases to a smaller unit, a socially and economically autonomous fraction of the band, the large extended family or "subband" (Moore 1987, pp. 177–180).

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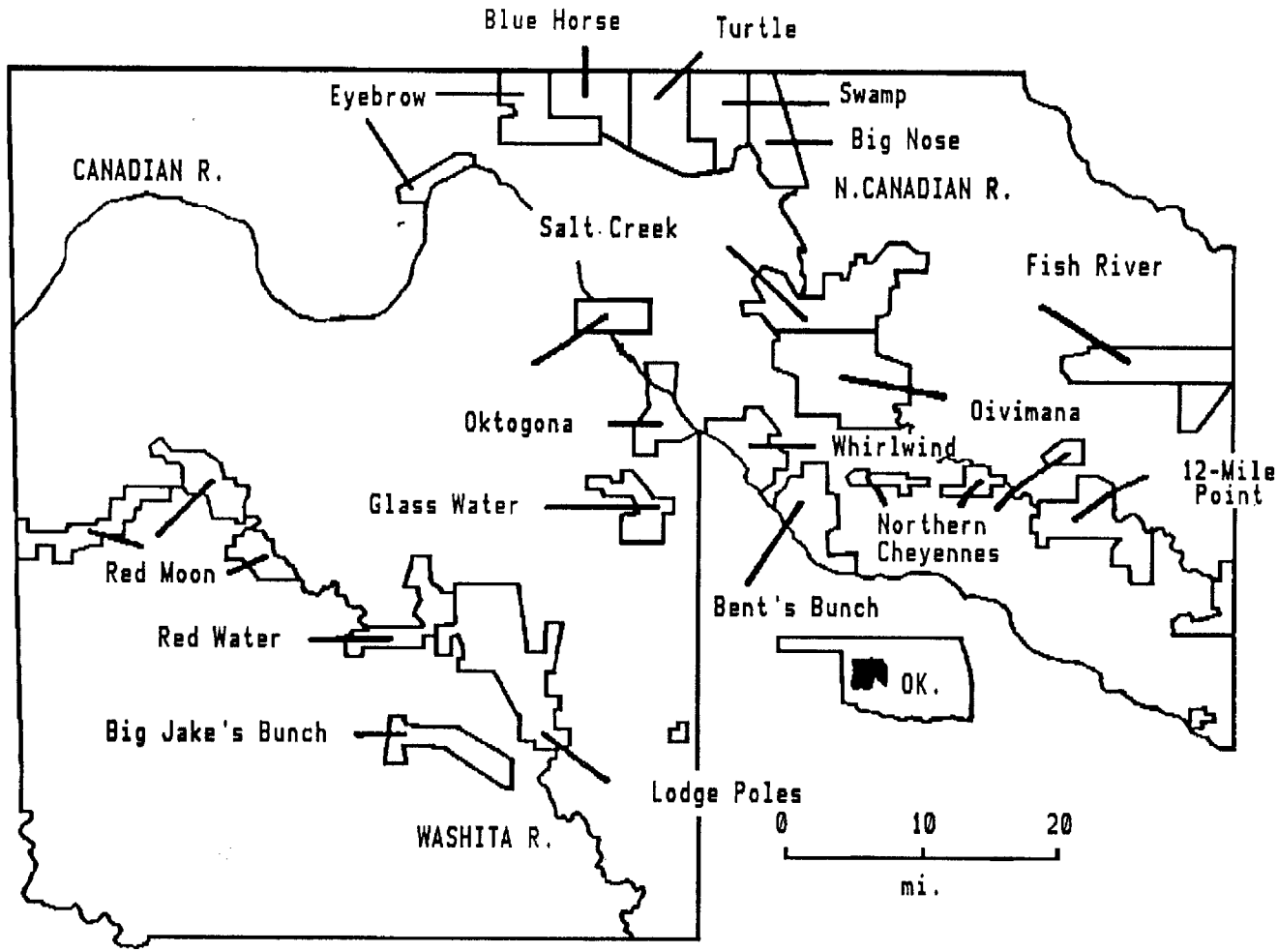

Figure 6. Macro-Bands on the 1892 Allotment Map.

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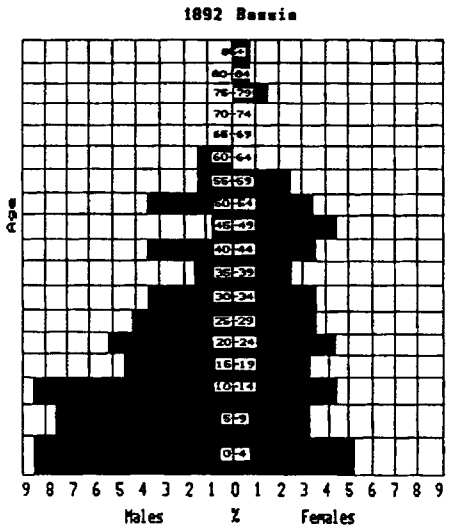

Figure 7. Age-Sex Structure of the Bessie Band.

The larger "band" unit is called *manhao* in Cheyenne ("those of the same blood"), while the subband is called *vestoz* ("those who camp together"). It was the *vestoz* units which apparently arrived together at the Agency to participate in the allotment process and to have their allotment choices entered on the master map. Each of the *manhao* units identified on Figure 6, then, consists of two or more *vestoz* subbands. We should note that this kind of information can be recovered from the 1892 census, since the 1880 census had no geographical parameters and did not note bands, subbands, or extended families. It assumed the basic social unit of Cheyenne society to be the tipi, usually comprising an augmented nuclear family. This, of course, represents the ethnocentric notions of the administrators about the physical and social autonomy of the nuclear family, perhaps true for Anglo-American society in that period but certainly incorrect for the Cheyennes.

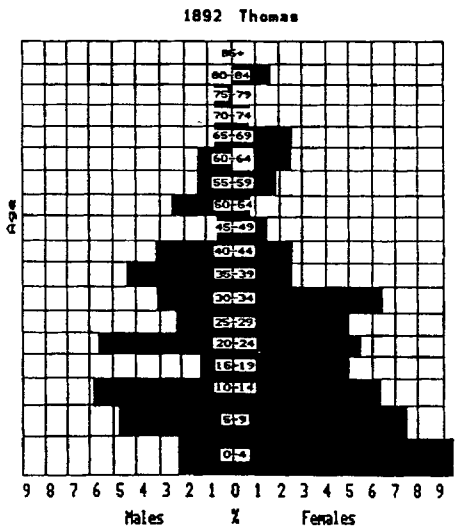

Figure 8. Age-Sex Structure of the Thomas Band.

Knowing from ethnohistorical sources that the different bands and subbands had somewhat different histories and ecologies, we undertook to compare the subgroups on their demographic variables. As we sought to construct age-sex pyramids for the individual bands, we discovered some surprising contrasts. Two of the bands in particular were distinctly anomalous—Big Jake's Bunch, later called the Bessie Band (Figure 7), and the amalgamated Glass Water/Oktogona group, later called the Thomas Band (Figure 8). Both had striking sex imbalances, the Bessie Bunch toward males and the Thomas Band toward females. Using binomial distribution, we discover that the probability of the Bessie anomaly occurring by chance alone was 0.0014 and the probability for the Thomas distribution is 0.0008. These low probabilities indicate that band membership may have been consciously manipulated.

To shed light on the social practices which might have resulted in these anomalies, we decided to interview modern Cheyenne elders. In commenting on the use of modern informants, Kertzer has correctly stated that the "use

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of contemporary societies to shed light on historical societies is a procedure that must be used with caution, for we obviously cannot project contemporary norms or conditions back to past situations . . ." (1984, p. 213). But he also observes that "it would be foolish not to make use of such evidence in appropriate cases." In this case, since we were dealing with practices which might well have persisted into the years remembered by living informants, the interviews appeared valid.

When asked about these matters and when shown the analysis of the Bessie and Thomas bands, Cheyenne elders usually responded obliquely, with a particular story, other versions of which we established as being contemporary with the 1892 census (Grinnell 1961, pp. 219–221). The story concerns the Cheyenne "trickster" hero Veho, who was said to have stumbled upon a village made up entirely of women who had no husbands. Very excited, he selected the most beautiful woman for a wife and then went on to tell others of his good fortune. He next happened upon a village consisting entirely of unmarried men, and he told them what he had found. They seized him and tied a stone to his leg so he could not get away as he led them to the village of women. But on the way there, the men all raced ahead so that when Veho arrived at the village, there was only one old hag left for him to marry.

Several elders were more explicit and sociological in their explanations, saying that in aboriginal times it was customary for young children to be exchanged between bands to form same-sex play groups.[7] A chief who was father to one of these same-sex sibling cohorts might then try to arrange marriages with a chief who was father to a cohort of the opposite sex. One tactic for chiefs to gain political power, then, was to try and build up these cohorts of sons or daughters either by their own polygynous marriages or by adopting the children of siblings. Our attention was thereby drawn by informants to the importance of adoption.

Besides the sex imbalance within some bands, another anomaly appears both in the 1892 and 1880 censuses and it also points to the importance of adoption. This anomaly can be detected in the census column headed "relationship to head of family." These entries, presumably native Cheyenne kin terms translated into English, were examined for the extent to which they could represent actual biological parentage. Analysis of this kind is, of course, extremely important for, and must precede, genetic research. But the Cheyenne "relationship" data frequently imply parental links that are biologically unlikely or impossible. For example, in the 1880 census, some "mothers" are as little as six years older than their children, and some "grandmothers" as little as eighteen years older. Some "nieces" are as much as eighty-three years younger than Ego, while a discrepancy of thirteen years exists between the mean relative ages of Ego and nephews (20.4 years) as compared with Ego and nieces (33.5 years) (Moore 1987, p. 299).

Despite these age anomalies, the families on the 1880 census exhibit extremely regular structures, especially in light of their recent historical experiences. That is, despite the total deaths of 300 persons or more in the massacres of Sand Creek, Washita and Summit Springs (Grinnell 1915), and despite additional deaths in the epidemics of 1840–1870 (Dobyns 1983), Cheyenne families in 1880 show up as neatly formed, balanced social units, with nuclear structures accounting for seventy-four percent of the sample, and augmentive relatives neatly distributed among the *tipis*. Clearly, adoption and remarriage repaired the ravages of high mortality. But before we conclude that the age anomalies were mostly the consequence of warfare, we should look at the normal kinship system to see if it, of itself, can account for the wide ranges in age of relatives noted in 1880.

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Concerning the general principles of the Cheyenne kinship system, we note that it is strongly generational, and would be expected to yield a smaller age range for Ego's relatives of a certain category (Moore 1988). In the English system, for example, a "cousin" can be of nearly any age relative to Ego, but Cheyenne cousins receive a different designation depending on generation, and on whether the relative is matrilateral or patrilateral. Cheyennes do not discriminate, however, between grandparents and the ancestors senior to them, or between grandchildren and descendants below them.

Most of the age-range discrepancies on the 1880 census occur in the generations between grandparent and grandchild, so that the merging of more distant generations does not explain the observed anomalies. But if the Cheyennes had maintained the so-called Omaha kinship system, in which all the patrilineal descendants of MB would be called M or MB, no matter what their generation, we would expect a tremendous range in age for these categories of kin (Fox 1967, pp. 222–228). Or if the Cheyennes had a so-called Crow system, in which all the matrilineal descendants of FZ would be called F or FZ regardless of generation, we would expect a similar large range on the patrilateral side. However, the Cheyennes reserve the terms F, M, FZ, and MB exclusively for the parental generation.

The system does, however, merge laterally within generations. For the grandparental generations, the terms are the same bilaterally, differentiated only by sex, and in fact can be extended to any elder with whom Ego is acquainted. For the parental generation, the term F is extended to FB for Egos of both sexes, and for male Ego to FFBS, and then to all male agnates of the first ascending generation. On the mother's side, MZ equals M for both sexes, and for female Ego the term M is extended to MMZD and then to all female uterine kin of that generation. Since Ego's mother might be the oldest or youngest in her sibship, the extension of terms laterally can increase their chronological range somewhat, but not to the extent listed in the 1880 census.

In Ego's generation the most significant native kin term is *nisis*, which requires a considerable discussion which we can only summarize here (Moore 1988). Our conclusions are based not only on field interviews, but on the extraordinary depth of available Cheyenne kin schedules, beginning with those of Lewis Henry Morgan in 1859 (Morgan 1871; Moore 1987, pp. 291–296). Essentially, the term *nisis* is a unilateral term applied to all same-sex collaterals of the same generation coresident with Ego in the extended family. From a male Ego's perspective, the scope of the term can include his brothers and potentially all his agnatic half-brothers, agnatic male cousins, and sometimes older agnatic "nephews" and younger "uncles." The female usage of the term *nisis* is the mirror image of male usage. For a female Ego, the term comprises sisters, and potentially all uterine half-sisters, female cousins, and sometimes younger "aunts" and older "nieces" who are coresident with Ego, some of whom were, in aboriginal times, destined to be cowives with her in a polygynous family. In both male and female cases, the term defines a sibship created among collaterals who have been collected into a marriage cohort, once again calling our attention to the important and pervasive nature of adoption in aboriginal Cheyenne society. Because the issue of adoption keeps appearing in the research, it is necessary to undertake a more thorough examination of this institution, using various ethnographic and ethnohistorical sources, as well as modern Cheyenne informants.

THE SIGNIFICANCE OF ADOPTION

In an anthropological context, Carroll has defined adoption as "any customary and optional procedure for taking as one's own a child

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of other parents'' (1970, p. 3). Goody has pointed out that in Western Europe adoption has had three main functions: 1) to provide homes for orphans, bastards, foundlings, and the children of impaired families; 2) to provide childless couples with social progeny; and 3) to provide an individual or couple with an heir to their property (Goody 1969, p. 57). In the case of the Cheyennes, we would emphasize instead three rather different purposes served by the institution of adoption: 1) to redistribute the children of sisters; 2) to provide care for elderly people; and 3) to obtain and maintain political power. Each of these will be discussed separately in this section.

Adoption by Mother's Sister

The extent of this kind of adoption is as difficult to quantify for modern Cheyennes as for Cheyennes in the nineteenth-century censuses, although our recent fieldwork indicates that it is a pervasive institution. It is difficult to ascertain the modern frequency of adoption by mother's sisters, for two reasons. First, social workers in western Oklahoma currently interpret the movement of children among households as evidence of instability in the family structure. Any unusual mobility of Indian children from one household to another can be used as a reason for putting children in foster homes. Consequently Cheyenne mothers are often reluctant to identify the biological parentage of children in their households. A second factor encouraging Cheyenne women to be circumspect about discussing adoption stems from a recent (1976) scandal concerning sterilization.[8] An investigation disclosed that about 1,500 Indian women in Oklahoma had been sterilized, perhaps several hundred of them Cheyennes. Some of them had been sterilized without their consent, some without their knowledge, and some were less than sixteen years of age. Now mostly in their thirties, these women are sometimes loath to admit that their children were adopted from their sisters, out of personal embarrassment.

In any case our fieldwork indicates that the informal adoption of children by the mother's sister is quite common, and is done rather casually. That is, it is not unusual for children to spend a year or two with one or several mother's sisters, depending on circumstances. Especially if a mother is experiencing hard times, or goes away to find a job, some or all of her children might stay with her sister. The Cheyenne kinship system already classifies mother's sisters as mother (*nako*), and the women are frequently already members of the same extended family household. Therefore adoption by mother's sister might mean only that the mother is absent and her duties are assumed by her sister. In other cases, especially in the small towns, as opposed to the rural areas, of western Oklahoma, adoption might only imply that the child moves to a different house in the same neighborhood. In all cases, the biological mother does not give up her social role permanently, but can return at any time and reclaim the child. If the mother's absence is lengthy or permanent, the sister might formalize the arrangement by giving the child a ceremonial name or sponsoring the child's participation in ceremonies or pow-wows. Only if there were inheritance rights to trust land at issue would the sister bother to make the adoption ''legal'' under United States law. The recent assumption of jurisdiction over adoptions by the tribal court system has affirmed the rights of sisters to adopt their nepots, even against the rights of biological fathers.[9] This is in accordance with traditional Cheyenne law and practice.

According to modern elders, the rights of sisters are aboriginal in origin, and are not the product of recent circumstances. If this is the case, then it would explain how Cheyenne society could have restructured itself so quickly in the nineteenth century after the destruction of war and disease. In effect, Cheyenne children

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have always had several potential mothers in reserve, already addressed as *nako* and probably familiar to the child as well. Quick adoption is thereby facilitated: an invisible adoption from the standpoint of the censuses, since the child's kin relationship to the adoptive mother is linguistically the same as to the biological mother. In Cheyenne, the new mother is not an aunt or stepmother, but *nako*, mother.

Adoption by Grandparents

In the extended family situation, grandparents frequently play a major role in raising their grandchildren, especially in supervising their day-to-day activities. When the extended family lives in a rural hamlet or in neighboring houses in town, one or more grandchildren usually sleep at their grandparents' house, sometimes on a rotating basis. Therefore it is not surprising to find that when grandparents live alone, as single persons or a couple away from their children, a grandchild lives with them. The usual rationale is to supply to the grandparents an active young person for errands and chores. When this kind of adoption occurs in modern times, the child begins to call the grandparents "father" and "mother," and they reciprocate with the term "son" or "daughter." If this practice was also common in aboriginal times, it explains the wide age range in the use of the parent-child kin terms. An adopting classificatory "grandmother," for example, who in biological fact could even be a great- or great-great-grandmother, might easily be fifty years older than her "daughter."

In modern times, this kind of adoption is very frequent. Among our major informants, for example, seven elderly couples live apart from their children. All but one of them have one or more grandchildren or great-grandchildren living with them. As with adoption by mother's sister, the situation can be more or less permanent, depending on circumstances. It is usual, however, for the child to be adopted with some formality and the exchange of gifts at about age twelve, and for the adoption to be permanent. In all six cases of adoption of which we have personal knowledge, the adoption was with the consent, if not at the request of, the grandchild. Grandchildren are said to get more loving attention from their grandparents than from their parents.

When a grandparent adopts a child, the child is usually from the largest sibling cohort of grandchildren. This follows the practice of adoption by a childless mother's sister; in that case, too, informants say, the sister with the most children should be the one to offer a child for adoption, other things being equal. Another similarity between these two kinds of adoption is that both are matrilineal—it is usually a daughter's child who is adopted by grandparents, rather than a son's child. This reflects the overall attitude that a father should have less control over his children than a mother. Of the six grandparent adoptions known to us, all are daughters' children or grandchildren.

Adoption for Political Purposes

According to Cheyenne elders, this kind of adoption was practiced more widely in the aboriginal period. One remnant practice is that middle-aged men frequently recruit fathers' brothers' sons and "take them for brothers." If one's father is living, he might be asked to take his brother's son for a son formally, with an announcement at a public meeting and an exchange of gifts. Also, traditional religionists frequently take brothers' sons and other junior male agnates as apprentices for religious roles. Ideally the resulting adoptive sibship should consist of four brothers, and Cheyenne men frequently count themselves as one of "four brothers," including adoptive as well as biological brothers in the total. These brothers usually act together and support one another in matters of ritual precedence and tribal politics.

One issue which confounds the adoptive kin-

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ship system is the question of how far the adoption should extend within the network of kin. That is, if one's uncle, for example, takes a man as a brother, does that man thereby become one's own uncle? This problem is even more confusing if the person adopted by uncle is already one's cousin or brother-in-law by some other link. There are two solutions to this problem. One solution can be provided at the time of adoption, when the adopting person, through an elder acting as spokesman, states the extent of the adoptive network. For example, a man taking a brother will state to his wife that he wants her, too, to take the man for a brother, and he might state to an uncle that he does not want the uncle to consider the adoptee to be a nephew, because of his respect for his uncle and his desire not to dilute the strength of the kin relationship. With similar tact, an adopting man might state that he *does* want his uncle to take his new brother as a nephew, because of his love and respect for both of them.

Another solution to the problem is to preserve the multiplicity and ambiguity of adoptive kin relationships, but to let the social context determine the kin role. At his uncle's house, for example, Ego would regard his uncle's adoptive brother as an uncle, but at Ego's own home the adoptee would remain a brother-in-law. Such discriminations are important because Cheyenne traditionalists preserve joking and respect relationships in their domestic behavior (Eggan 1937, pp. 75–81). It is also important because the ritual and sharing relationships (food, money, etc.) between two persons depend on the kin tie, adoptive or otherwise. And, needless to say, the multiplicity and confusion of adoptive ties provide endless material for jokes and teasing in the family, where a misbehaving relative will be asserted to be Ego's brother by a teasing aunt, while Ego will only admit the malcreant as a cousin-in-law.

If practiced in the aboriginal period, this context-dictated kin behavior can explain a number of anomalies in our nominal linkage attempts. There are some cases where a kin relationship stated on one census, in the context of a particular household, cannot be reconciled with a kin relationship from another census, from another household, although nominal and chronological criteria would argue for a linkage. Working retrospectively, however, we cannot resolve such biological ambiguities, any more than we can resolve the ambiguities of merged kin categories. For many kinds of analyses, however, the ambiguity is irrelevant.

Unlike adopted men in the early reservation period, adopted women are seldom found in different households on different censuses. But like any group of adoptive and politically-active brothers, a cohort of sisters similarly preserves a special solidarity. This is probably derived, in part, from the aboriginal practice of matrilocality, which kept sisters with their mother for a lifetime. In early reservation days, the rate of matrilocality for Cheyenne women was about seventy percent (Moore 1980). In their band of orientation, women were regarded as "rulers of the camp" and maintained their own women's organizations for various purposes (Grinnell 1962, Vol. 1, pp. 159–169). The modern Beading Guilds and War Mothers groups preserve the spirit and purpose of these organizations. Now as then, cohorts of sisters are the organizational core of the groups. But in the case of women, recruitment to the groups is matrilineal, not patrilineal, as with men's groups. That is, the War Mothers of a particular town are built around a core of women who are uterine kin, not agnatic kin, reflecting the aboriginal use of the kin term *nisis*.

If informants are correct that the various kinds of adoption were widely utilized in the aboriginal period, the overall consequence should be the "smoothing" of the number of children in sibships: There should be few mothers with none or one child, and few with more than five. Perhaps counteracting the tendency of adoption to smooth the number of

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children in the "normal" sibship is the practice, already noted, of building same-sex sibships. We do not know what decision might have been reached by aboriginal parents when faced with the opportunity of adding, say, a daughter to a household which already had three daughters. There is a conflict in ideal values between building large same-sex groups, and of reducing the total number of children by allowing a child to be adopted.

Theoretically, it should be possible to estimate the extent of Cheyenne adoption by comparing the number of children ever-born with the size of completed families as distorted by adoption. That is, the distribution of the sizes of adoptive sibships should exhibit a smaller variance than the distribution of biological ever-born sibships, because adoption has taken children out of large sibships and used them to augment smaller sibships.

On the 1900 census, there is the potential of measuring the size of completed biological sibships for older women, because the schedule includes a question about children ever born. We select as our sample women aged 45–59, listed either as wives or female heads of families on the census, whom we assume to be past their child-bearing years. These women were largely the child-bearers of the late aboriginal and early reservation periods, when the population still lived in mobile bands. No doubt many of these women are also represented in the 1880 sample. We cannot link them directly to 1880, however, because of the nominal difficulties inherent in the pre-allotment material. In any event, ninety women, aged 45–49, who reported children ever born on the 1900 census, show a mean sibship size of 3.04, with a standard deviation of 2.16. We emphasize that this is mean sibship of a population subset at best, not directly related to completed fertility rate, because seventeen women aged 45–59 failed to report and are not part of the sample. In addition, we believe that any general assertions derived from the ever-born category must be viewed with great caution, because we do not know precisely how the question on the census schedule was translated into Cheyenne, how it was understood by informants, or why certain informants failed to respond. Whether or how they might have included adoptees and deaths in their totals, for example, we simply do not know.

Even if the 1900 responses do in fact indicate biological ever-born children, we still do not have any direct measure of sizes or distribution of completed adoptive sibships with which to compare these figures. For a sample of real Cheyenne families which might exhibit adoption in their sibships, we have only households in the process of formation, as, for example, in the 1880 census sample we used to calculate fertility. They do not include children unborn or not yet adopted. It does not help our analysis to take as a sample the women from 1880 who have completed child-bearing, since their older children may have already left the household at the time of the census, and they were not asked about ever-born. Our only alternative might be to extrapolate completed ever-born for the various age cohorts of mothers from the 1880 fertility sample, based on age of children in the household. But we would have to use extrapolative parameters from populations which are culturally very different (e.g., Grabill and Davidson 1968), and we have no way of differentiating the child spacing resulting from mortality from that which results from adoption. Consequently we have had to leave unresolved the problem of quantifying the extent of adoption, pending the development of new data or new methods.

Having gained some understanding of the significance of adoption, and of the likely consequences for demography of the Cheyenne kinship system, we are in a better position to look again at the early censuses with the purpose of refining the stated kin categories and reconstituting Cheyenne families. Our major purpose will be to use the reconstituted families

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for examining fertility, although we will see that the possibilities of attacking other problems are also enhanced by the improved database.

FERTILITY

To assess fertility in the total population, we should use measurements which do not smooth or mask the social practices, such as adoption, which are of interest to us. We consider general fertility rates as the most appropriate because they accurately reflect the historical experience of the population while eliminating distortions caused by maldistributions among age and sex cohorts. That is, while eliminating these two major demographic distortions, the data set retains its sociological integrity.

The general trajectory of Southern Cheyenne fertility from 1880 to 1900 is upward, from 22.34 in 1880 to 60.84 in 1892. The low initial fertility, we believe, reflects the hardship and starvation of the late warfare period, which was scarcely ameliorated in the early reservation period, as the government struggled to supply promised rations (Berthrong 1972, 1976).

The increase in fertility by 1892 represents a more stable food supply, and the generally improved environmental conditions which Romaniuk has connected to improved birth rates (1981). Between 1892 and 1900 the increase in fertility was more gradual, settling at 78.12 for the 1900 census. Aside from the smallpox epidemic of 1892, which temporarily impaired female reproductive performance, Southern Cheyenne births show a gradual increase, usually exceeding mortality.[10] In general, this period was characterized by a rapid successful adaptation to farming, and consequently a steadily improving diet (Nespor 1984).

Perhaps the most interesting questions about Cheyenne fertility in this early reservation period concern the contrast between monogamous and polygynous parents. A number of studies comparing maternal fertility have been done for tribal societies in Africa (Dorjahn 1959; B. Isaac 1980), while the emphasis has been more on paternity and the founder effect in studies of South American Indians (Neel and Schull 1972). The classic study for North America is still Hrdlicka's 1931 comparison of monogamous and polygynous Sioux Indian women. On all continents, the consistent finding has been that monogamous women were more fertile than polygynous women.

Polygyny is explicitly noted for Cheyenne women both on the 1880 and 1900 censuses. As we have said, the 1880 census is relatively trustworthy, with good cooperation for the reporting of polygyny. Collateral documents tell us, however, that by 1900 the institution was under heavy attack by missionaries and the Bureau of Indian Affairs (Berthrong 1976, pp. 220–225). Nevertheless, the 1900 census will provide an opportunity to contrast children ever-born for polygynous and monogamous women past our estimated end of childbearing, which is forty-four years.

The 1880 census shows active polygynous families with young mothers and young children. To analyze this reported polygyny, however, we must still make some important corrections along lines dictated by the ethnographic facts stated above. First, it is clear that polygyny is listed explicitly in the 1880 schedules only in those cases where the multiple wives lived in the same tipi with the "head of family." There are several score of families in the census, however, in which a woman of child-bearing age is listed as a "head of family," along with her children. Some of these women, according to our genealogies, were cowives in polygynous families.

Some living elders were raised in polygynous families, and the etiquette of living arrangements is well remembered. The established polygynous families usually lived in two or more tipis, with the husband spending some time in each. In the 1880 cases where we could

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find a polygynous family known as such from our genealogies, there was a consistent serial pattern of tipi listing. The husband's current location among his wives' tipis, and the persons resident in his tipi are listed first on the census, and are followed by the listings of other tipis, in which reside the other cowives, often entered as "married," and their coresidents.

In identifying child-bearing female heads of families as cowives, we should note that spinsterhood was extremely unusual among Cheyennes, and that widows usually remarried after one year of mourning, most often to their dead husband's biological or classificatory brother (Eggan 1937, p. 61). The idea of an unmarried woman of child-bearing age living alone with her children is quite contrary to the ethnography.

From this evidence, then, we infer that the female child-bearing "heads of family" in the census are in fact cowives of the male "head of family" whose listing they follow. Complicating our application of this principle to the actual census, however, is the problem of missing schedules. It may well be that a break in the census occurs after the tipi of a polygynous man, with the tipis of his other cowives missing, thereby implying a monogamous arrangement. Also, some segments of the census begin with a female head of family who might well be a cowife of a missing husband. One characteristic of the 1880 census which assists us in family reconstitution, however, is that both monogamy and polygyny tend to occur in "runs" on the census. For the contrasts of fertility below, however, we have excluded cases made ambiguous by missing schedules.

Table 3 presents three illustrations of the reconstitution of extended families. These are not the examples which were easiest to reconstruct, but some of the most difficult and most interesting by comparison with standard procedures (Wrigley and Schofield 1973). In most cases, we merely added subsequent female heads of households as cowives to the male head listed just ahead of them. But these three contain problems requiring special solutions based on our knowledge of the kinship system and of usual marriage practices, as related by ethnographies and our informants.

The family of White Eagle, number 274, contains explicitly listed polygyny only for the two wives in his tipi. However, it seems clear that the female head of the subsequent household is in fact White Eagle's first wife (w1), living there with her children. The census taker, however, took the oldest son as "head of household," obscuring the relationship of this tipi to the previous one. In addition to the second and third wives, the first tipi also contains White Eagle's mother and two children. We believe that we can reliably assign the eight-year-old child to w2, since w3 was only ten years old at the child's birth, but the two-year-old must remain indeterminate as to maternity. We should add that the ethnography would lead us to expect that w2 and w3 are biological or classificatory sisters, since we are told that it was usually only sororal cowives who consented to live in the same tipi. Whether w1 is another sister we cannot say.

Family 67 consists of the descendants of Left Hand, a well-known chief who bequeathed his name to his son, who is listed as the head of family of the first tipi. Here again, the census taker has seriously misled us, listing the widowed cowives of the elder Left Hand as "aunts" of the son, who, we know from our genealogies, is the son of w4. In this case, the elder Left Hand's wives were apparently too old to consider remarriage, so they remained in the households with their children. W1 and w2, probably sisters, had adopted two grandchildren, whom we recognize from the relative age disparity, although their biological mothers are absent. The second tipi contains Left Hand's third wife, along with her unmarried son and a granddaughter, probably from an absent daughter. With a grown son and a little girl to fetch and carry, w3 is in a stable domes-

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Table 3
Reconstituted Polygynous Families from 1880

Family of White Eagle, #274			
	As Listed		*Corrected*
xx	m	31	ego
w	f	24	w2
w	f	18	w3
m	f	60	m
d	f	8	d,w2
s	m	2	s,w2/w3
xx	m	14	s,w1
m	f	31	w1
b	m	10	s,w1
b	m	8	s,w1
b	m	2	s,w1
Family of Left Hand, #067			
xx	m	19	s,w4
a	f	70	w1
a	f	59	w2
b	m	6	gs,w2
b	m	3	gs,w2
xx	f	59	w3
s	m	21	s,w3
gd	f	5	gd,w3
xx	f	49	w4
s	m	20	s,w4
s	m	12	s,w4
d	f	5	d,w4

Family of Limpy, #377			
	As Listed		*Corrected*
xx	m	51	ego
s	m	25	s,w1
s	m	17	s,w1
w	f	36	w3
d	f	19	d,w3
d	f	4	d,w3
s	f	2	s,w3
d	f	14	d,w3
xx	f	90	m1,w2
d	f	40	w2
gd	f	12	d,w2
gs	m	24	s,w2
gd	f	13	d,w2
gd	f	18	d,w2
i	f	7	i/d,w2
xx	f	23	w4
d	f	9	d,w4/w3
d	f	11	d,w4/w3
d	f	2	d,w4
s	m	7	s,w4
xx	m	19	s,w1
b	m	25	s,w1
m	f	46	w1
z	f	14	d,w1
b	m	11	s,w1
z	f	4	d,w1
b	m	24	s,w1
a	f	64	z1,w1
zl	f	19	d1,w1

tic situation. The third tipi contains w4, the youngest wife, who still has three of her children with her. Their relative ages, however, suggest the possibility that the five-year-old is an adopted grandchild, from an absent mother.

Our last example, the most interesting, is the family of the famous chief named Limpy, number 377. Most of the postulated relationships in this case can be confirmed from hiership files and genealogies. During the census of 1880, Limpy was apparently living with his third wife, her children, and two adult sons from w1. We should keep in mind, however, that these sons regarded w3 as mother, especially if w3 and w1 are sisters. The second tipi contains w2, her children and her aged mother. The "niece" of this family (coded i) becomes a daughter on the 1892 census. The third tipi contains Limpy's youngest wife, probably a sister of w3, who has taken in two of her sister's children,

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being too young to have borne them herself. This is the kind of redistribution of children among sisters that the ethnography has told us to expect. The fourth tipi contains Limpy's first wife and her remaining children, along with her sixty-four-year-old sister, thirteen years older than Limpy and therefore probably not a cowife.

We should note that to compare the fertility of polygynous and monogamous women, we do not necessarily have to assign children to particular cowives in a polygynous household, but only to count the total number of children in polygynous households and to calculate their ratio to the number of cowives in polygynous households. We do have to decide, however, whether the listed children of cowives are adopted grandchildren or own children. As can be seen from the examples above, this is sometimes difficult. But, fortunately, the ambiguity usually occurs among older mothers, so if we adjust the age range of the mothers in our sample, we diminish the problem. As long as we use the same standards of judgment for polygynous and monogamous women, we can make comparisons.

Having assigned wives to husbands and children to mothers in the 1880 census, we took as our fertility sample the women listed as "wives" or female "heads of household" from eighteen to thirty-nine years of age. This excludes the older and more problematic among the polygynous families we have reconstituted. We took as our sample of fathers the men identified as being married to these women. Children included in the sample are those listed with the identified women. In some polygynous households, as we have seen, children could not be assigned to a particular mother, but this did not affect our calculations since we are interested in total numbers and not distribution in this case.

The 1880 census explicitly notes twenty-one men, forty-two women, and sixty-seven children as members of polygynous households, these numbers representing only the cases in which the cowives lived in the same tipi. The number translates into child/parent ratios of 1.595 for women and 3.190 for men. Using our techniques of reconstituting polygynous families, however, we can identify twelve additional women of the required age range and four additional fathers as polygynous, raising the total number of children to ninety-five. This translates into polygynous child/parent ratios of 1.76 for women and 3.80 for men. Taking the remaining eighty-six married couples to be monogamous, and with a total of 221 children, we calculate for them a child/parent ratio of 2.57. The overall ratio for all married women is 2.26 and for all married men 2.85. It must be mentioned that our sample of polygynous women has higher fertility than the polygynous women officially noted because the women we have added are, on average, older and farther into their childbearing period.

Clearly, from the standpoint of women, monogamous marriages are more fertile than polygynous marriages, by a factor of 1.46 (2.57/1.76). Equally clearly, from the standpoint of men, polygynous situations are more fertile than monogamous ones, by a similar factor of 1.48 (3.80/2.57). Expressing the ratios with polygynous women, the least fertile group, as unity, we get relative fertilities of 2.16: 1.46: 1.00 for polygynous husbands: monogamous parents: polygynous mothers, respectively. These figures confirm tendencies reported for other tribal societies, and reinforce the notion that polygynous males are significantly overrepresented in the genetic structure of subsequent generations.

Turning to the 1900 census, we find it a much more difficult source for reconstituting families by using the methods for the 1880 census. Also, our genealogies are much thinner in the later period, since many people have disappeared from the heirship files because of the sale of their allotted land. The number of explicitly

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reported polygynous relationships is also smaller, because the institution had been suffering under the attacks of missionaries and government agents. In retrospect, however, it is difficult to say how much of the low reporting of polygyny is low incidence, and how much is simply misrepresentation. Despite these difficulties, we can still compare fertility by using the ever-born response, a column heading which did not appear in 1880. We can proceed by segregating the census categories of women whom we expect to contrast based on our 1880 results, and by comparing their reported numbers of children ever-born. Again we will use women aged 45–59, who best represent aboriginal demographic conditions.

Only seven women in the sample admitted to polygynous relationships, with fourteen children ever-born, giving a mean of 2.00 and a standard deviation of 1.69. Also, sixty-eight women said they were monogamous, stating a total ever-born of 208 for a 3.06 mean and a standard deviation of 2.23. The other category of women which interests us is female family heads, who we determined were actually polygynous in 1880. From the 1900 census, however, we are taking an older sample, 45–59 instead of 18–39, because we want to use the ever-born response, and the dearth of collateral information makes reliable linkage from 1880 to 1900 nearly impossible. Still, we note that there are fifteen female household heads, with reported ever-born children totaling fifty-two, giving a mean of 3.47 and a standard deviation of 1.86.

In this census, then, the women of highest fertility are the presumably polygynous female heads of household rather than the monogamous wives. These results contradict the trends of 1880, which showed monogamous women to be more fertile. We believe, however, that the 1900 census is seriously flawed in its enumeration so that the results are less reliable than in 1880, where there was good genealogical control enriched by a wealth of collateral documents. But in 1900 not only were there seventeen women of sample age who failed to respond to the question about ever-born, but among women in the very oldest group, sixty and over, twenty of forty-eight reported no children, yielding a very unlikely childless percentage of 41.7. In addition, one group, the Hammon or Red Moon band, gave only names and ages in 1900 and refused to answer any questions. In sum, we believe that both failure to report and the reporting of no children ever born were merely techniques of resisting the census on the part of a people whose culture was under severe attack by the dominant society. We do not believe, however, that the 1880 or the 1891/1892 censuses embody the same problems.

CONCLUSIONS

We have obviously not exhausted the opportunities offered by the kind of improved tribal censuses we have created. But our use of collateral documents, ethnographic sources, and living informants has taken us beyond the possibilities presented by the raw, uncorrected schedules. The raw data suggested, ethnocentrically, a socio-political structure in which a large number of apparently coequal nuclear families existed in a society which had no bands, subbands, or families extended beyond the single tipi. Also, the census takers frequently provided us with wrong and misleading "heads of families," once again reflecting merely their own ethnocentric notions of proper familial authority.

Despite such handicaps we have been able to identify bands, divide them into subbands, reconstitute extended families, discover unstated polygyny, contrast the demographic structure of subbands, and compare the fertilities of monogamous and polygynous parents. These findings create the possibility of describing the cycles of development within the polygynous extended family and within the

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subband, subjects which we have not pursued in this article. Also quite possible is a longitudinal study of family structure into the late reservation period and up to modern times, using heirship records and field genealogies. Although the 1880 census is not complete and some heirship files are in disrepair, we can still follow groups such as Limpy's polygynous extended family through time, watching the restructuring that resulted from allotment in severalty, the Indian Reorganization Act, and from the dislocations occasioned by World War II.

The press of time is great, however, for the prompt use of the techniques outlined here. In many Native American societies each year diminishes the number of elders who are familiar with the social conditions reflected in the early censuses. We hope these ethnohistorical techniques can also be applied to groups beyond the borders of the United States. The archives of all imperial and colonial countries hold untold riches in demographic data concerning tribal societies, although appropriate ethnohistorical techniques will have to be devised in each case, reflecting the singular combination of language, culture, and social practice within each society.

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NOTES

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7. We especially wish to acknowledge the help of Mr. John Black Owl and Mrs. Vinnie Hoffman for this information.

8. Report from Comptroller General of the United States to Sen. James Abourezk, dated 1976, coded HRD-76-108 and B-164031(5).

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