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Article Summary: During 1780-1880 the western or Teton divisions of the Sioux emerged as the dominant military-political force on the native northern plains. Until the expanding power of the United States confined all Indians to reservations, the Tetons were able to dominate their neighbors and gradually extend their hunting ranges across the high plains from the Missouri Valley to the foothills of the Rocky Mountains. This essay demonstrates the central importance of population studies in interpreting tribal histories and to provide a framework for understanding the major trends of Sioux population from the time of European contact to the imposition of the reservation system.

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Names: Three Bears; Arthur J Ray; Pierre Le Sueur; William Clark; Pierre-Antoine Tabeau; Thaddeus A Culbertson; Alfred W Vaughan; K Warren; Edwin T Denig; Thomas S Twiss; Henry F Dobyns; Pierre le Moynes; Sieur d'Iberville; David Thompson; Alexander Mackenzie; Fr Louis Hennepin; Conrad E Heidenreich; Gary C Anderson; Jonathan Carver; Helen H Tanner; Zebulon Pike; William Clark; Meriweather Lewis; George E Hyde; Pierre Dorion; John S Gray; Valentine T McGillicuddy; J C R Clark; Pierre Esprit Radisson; Jean Valle; John Ewers; Stephen R Riggs; Joseph N Nicollet; Four Bears; Red-Tailed Eagle; Elk Head; Crow Feather; Keeper of the Sacred Calf Pipe; Fire Heart; John Grass; Sitting Bull; Running Antelope; One Horn; Standing Elk; Swift Bear; Pawnee Killer; Dove Eye; Spotted Tail

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Photographs / Images: Three Bears, Oglala; Sioux Indian women; Sioux Indian boy; Map Expansion of the Teton Sioux, 1655-1870; Table, Estimates of Sioux Population 1660-1805 and Notes; Table, Estimates of Teton Sioux Population by Tribal Divisions, 1805-1881 and Notes; Table, Reconstructed Teton Sioux Population by Tribal Divisions, 1805-1881 and Notes; Graphs, Total Sioux Population, 1655-1905, and Total Teton Population, 1801-1881; Standing Elk, Yankton; Swift Bear, Brule; Pawnee Killer, Oglala; Graph, Brule and Oglala Population, 1801-1881; Spotted Tail; Dove Eye, Spotted Tail's daughter; Graph, Miniconjou, Two Kettle, Sans Arc, Sihhasapa, and Hunkpapa Population, 1801-1881; Running Antelope, Hunkpapa; Graph, Tribal Divisions as Percentages of Reconstructed Teton Population, 1805-1881

TETON SIOUX

Population History, 1655-1881

By Kingsley M. Bray

Introduction

During the century 1780-1880 the western or Teton divisions of the Sioux emerged as the dominant military-political force on the native northern plains. Until the expanding power of the United States confined all Indians to reservations, the Tetons were able to dominate their neighbors, both horticultural "village" tribes and nomadic hunters, and gradually to extend their hunting ranges across the high plains from the Missouri Valley to the foothills of the Rocky Mountains. Although the expansionist dimension of Teton history has frequently been outlined, no systematic attempt has been made to assess the fundamental demographic factors involved during a period of massive population change.¹ The following essay hopes to demonstrate the central importance of population studies in interpreting tribal histories and to provide a sound framework for understanding the major trends of Sioux population in the period from European contact to the imposition of the reservation system.

In basing such a history upon contemporary population estimates, a cautionary note must be sounded. Until late in the nineteenth century such estimates preserve at best approximations of relative accuracy. They were made by men little concerned with the minute breakdown of populations necessary for sophisticated demographic analysis; they purport to count peoples whose fluid, mobile society



Three Bears, Oglala. (NSHS-R539:2-5)

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permitted no regular censuses. Sources are highly variable in quality, with errors arising through omission, simple misunderstandings, or methodological flaws. The sources reflect the estimators' temptations to round figures up and down, to submit to impressionistic computations based on the perception that the Sioux vastly outnumbered their neighbors, or to overcompensate for errors of magnification by drastically underestimating. Even as the period closes, when estimates were being replaced by head counts at many agencies, the largest Teton divisions were still being overcounted by handsome percentages, anomalies only cleared by the rigorous census methods adopted after 1886.

Data, therefore, are difficult to assess, interpret, and use. By and large, I have rejected those figures outlandishly high or unconscionably low: sufficient examples exist to constitute two distinct traditions in Sioux historiography. I have sought to expose the flaws in the methodology of one representative undercounting (Lewis and Clark's "Statistical View of the Indian Nations"), and in a typical case of overestimating (inflated official estimates of the 1870s), so misrepresentations of population scale need not be perpetuated.

Methodological Note

In any population assessment working ratios of the principal units of enumeration must be established. Derived from the ethnohistoric sources these units are warriors, men, people, and lodges, reflecting estimators' biases toward defining military and hunting capacities. Women and children were rarely estimated separately in the prereservation era. In a tabulation

presented by Arthur J. Ray, however, Hudson's Bay Company officials presented a detailed breakdown of the tribal populations (Assiniboin, Cree, Ojibwa) in the Red River area of the northeastern plains in 1815. Population was carefully tabulated by age and gender, allowing the establishment of local average ratios as follows: adult males, 27 percent; adult females, 33 percent; and children, 40 percent.²

These ratios probably have high predictive potential for analyzing native plains populations, for they agree well with the systematic head counts of surrendering Teton Sioux in 1877-81, which break down to these averages: adult males, 25 percent; adult females, 35 percent; and children, 40 percent.³

Ratios of persons per lodge, the unit of habitation, are more problematic. A comparison of evidence across the historic period demonstrates a clear net decline in the persons per lodge ratio. In 1700 Pierre Le Sueur defined the typical occupants of a lodge as two nuclear families, approximately ten to fifteen persons. A century later William Clark similarly concluded "the lodges contain 10 to 15 persons," while Pierre-Antoine Tabeau suggested a ratio of "100 hommes par 40 loges, & ce calcul & assez juste." Tabeau's experience and careful formulation merit respect, suggesting a conversion figure for 1805 of ten persons per lodge. Again, two nuclear families would seem to be the normal residential unit, the modest decline possibly reflecting the aftereffects of the depopulation period.⁴

Over the course of the nineteenth century the perceived decline accelerated. A deflated figure of five persons per lodge served as the basis for military rationing of Teton camps at Fort Laramie in 1871. In the interim period ratios explicit or implied varied widely. Selecting the 1850s one encounters conflicting estimates ranging from Thaddeus A. Culbertson's ten to one, through the eight to one ratio proposed by Upper Missouri agent Alfred W. Vaughan and Lt. Gouverneur K. Warren, to Edwin T. Denig's deflationary four to one ratio. The observations of Upper



Sioux Indian women. (NSHS-G981.4-6)

Platte Indian agent Thomas S. Twiss reflect critical thinking applied to the problem. Upon assuming his duties he accepted a ratio of ten to one, but within a year he had familiarized himself with Teton society and reduced his assessment to a ratio of 5.5 persons per lodge.⁵

Weighing this evidence and disregarding local and temporary fluctuations due to visitations of disease, military reverses, and hunting variables, I have proposed a general Teton ratio of ten persons per

lodge in 1805 declining to six to one by 1870. Clearly by 1870 the typical residential unit was a single nuclear family. This trend has been largely ignored by plains historians and ethnologists, masking important implications for the study of Teton society. Undoubtedly, the decline in the persons per lodge ratio reflects increased standards of living enjoyed by the nomadic tribes as they progressively replaced dog with horse traction and acquired larger horse herds, more material

Teton Sioux Population



Sioux Indian boy. (NSHS-G981.4-1)

possessions, surpluses of buffalo robes to trade for manufactured goods, and treaty-guaranteed annuity goods. Nevertheless, such assessments should not obscure recognition that increased status and wealth differences may significantly skew the average figure downward. The *nouveau riche* of the nineteenth century sought to house multiple wives and "beloved children" in separate tipis, indicating that many people may have continued to live in comparatively crowded lodges.

Of all the enumeration figures, lodge counts are probably the most accurate. If we recognize the general principle of the declining ratio of persons per lodge and accordingly adjust calculations of population, seemingly inconsistent divisional estimates reveal coherent population trends. The decline in size of the typical household unit, a process accelerating

through the nineteenth century, has significant implications for assessing Teton cultural change.

Disease, Decline, and Population Nadir: Recent Developments in Native American Demography

In the last generation demographic studies have provided a new quantitative dimension to our understanding of Indian history after European contact. Although scholars are still not agreed on the scale of depopulation, it is understood that the native societies of the New World underwent an appalling decline after the arrival of Europeans. The most important factor in this depopulation was the introduction of Old World diseases, such as measles, cholera, influenza, and especially smallpox, to which Indians had no immunities. Henry F. Dobyns has argued for an average depopulation rate throughout the Americas of 95 percent during a 130-year (five generation) period beginning at "contact" for each tribal group. For tribes that survived as viable ethnic units at the end of this period, demographic conditions typically stabilized and the population might begin to slowly rise. More recently Dobyns has suggested that from the sixteenth century onwards native populations across the continent were struck simultaneously by epidemics that spread far in advance of the contact frontier.⁶

Some of Dobyns's assumptions, especially that of a single, continent-wide rate of depopulation, have been questioned. His model was based on analysis of densely populated, sedentary societies in Mexico, Peru, and California, and its applicability to sparse, hunter-gatherer populations is questionable. Nevertheless, analysis of eighteenth- and nineteenth-century population estimates of the farming village tribes of the prairie-plains suggest rates of depopulation of the order predicted by Dobyns.

The Arikaras, important neighbors of the Teton Sioux, were said to count 4,000 men or approximately 16,000 persons before a series of epidemics that possibly began early in the eighteenth century. Arikara population declined by 98 per-

cent to 380 persons in 1904, after which their numbers began to grow again.⁷ A comparable rate (97 percent) for the related Pawnee tribe is indicated for the period 1750-1910, when population declined from approximately 20,000 to 650.⁸ Assuming a contact population of roughly 14,000 Mandans and Hidatsas, 95 percent depopulation marked their decline to 756 persons in 1910. Working from the Pierre le Moyne, Sieur d'Iberville, estimates of 1702 and the 1910 U.S. Census the combined Omaha-Ponca and Iowa-Oto tribes declined by roughly 70 percent, the former group from approximately 7,200 persons ("1,200 families") to 1,980, the latter from 1,800 to 576.⁹

These figures are problematic. The point of depopulation onset is unclear, and the length of the decline period may exceed Dobyns's 130-year prediction. Continuing village tribe depopulation in the nineteenth century probably reflected attrition from war. It is clear, however, that the Dobyns model fits well enough for the village tribes; population declined by 70-98 percent during a depopulation period comprising much of the eighteenth and nineteenth centuries.

For the nomadic hunting tribes of the high plains, estimates of even the roughest kind are usually not available until after 1800. Although these statistics are even more in the nature of approximations, they suggest a much wider variation in depopulation rates and generally a less catastrophic demographic collapse. The Comanches seem to have suffered most severely, declining by 85 percent in the 1805-1910 period (from 8,000 to 1,171).¹⁰ Following them are the Atsinas, losing 80 percent of their 1805 population of 2,500 to 510 persons by 1910; the Crows, declining by 70 percent (6,000 to 1,799); and the Assiniboinis, declining by 68 percent (8,000 to 2,605). Less severe losses were sustained by the Blackfeet, losing approximately 50 percent of their 1805 population of 9,000 to reach a 1910 nadir of 4,635. Arapaho numbers declined from 2,500 in 1805 to 1,419 in 1910 (43 percent), while Cheyenne numbers actually showed little net change at about 3,000.

Kiowa population likewise remained relatively constant at somewhat over 1,000.¹¹

This selection of nomadic tribes reveals greater variation in nineteenth-century population history from the non-horticultural people of the plains, ranging from no net loss to 85 percent depopulation. The Plains Cree, one of the last of the tribal groups to migrate from the northeastern woodlands onto the plains, show signs of a phenomenal population growth in the nineteenth century. In 1805 Plains Cree numbers did not exceed 3,000, but by 1910 Canadian Plains Cree were almost 8,000 strong, a figure excluding small numbers of the tribe located in the U.S. This argues for Plains Cree growth approaching 170 percent during the nineteenth century.

Undoubtedly this growth is partly explained by a drain of Woods Cree population out of the subarctic forest to augment the Plains bands. It is therefore unclear to what extent localized Plains Cree growth reflects absolute population growth. It seems likely that total Cree population in 1910 was near its contact level, with steady growth characterizing the nineteenth century. Cree population reached its nadir after the smallpox epidemics of 1780-82. At this time most of the plains tribes had only just entered their cycle of depopulation. Cree bands sifting onto the northeastern plains after 1785 were at a huge demographic advantage.¹²

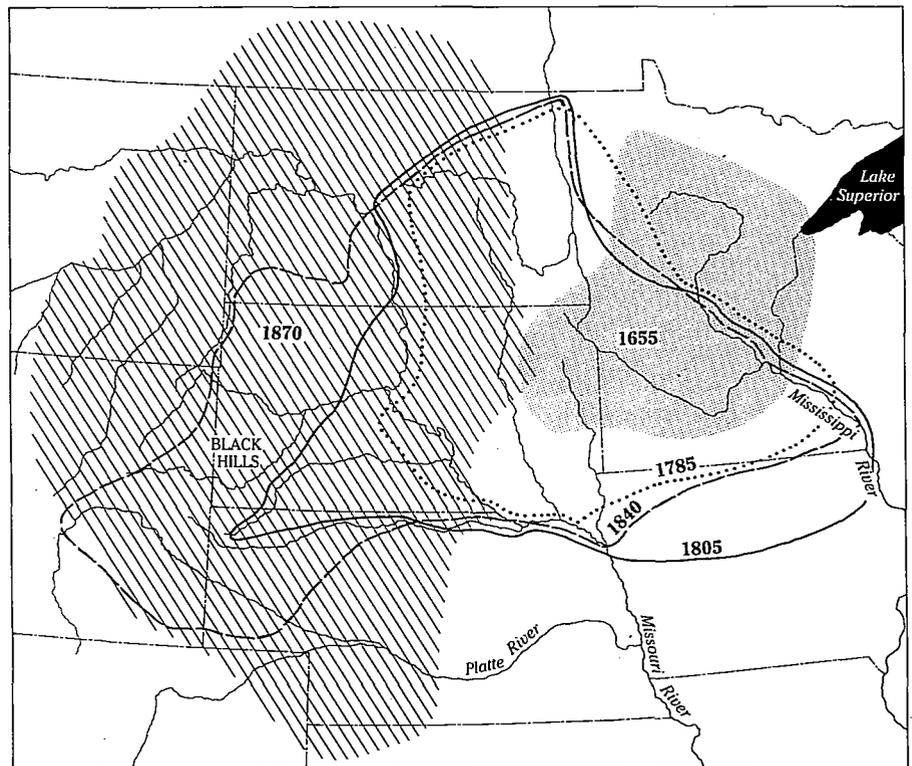
Moreover, although the Cree depopulation rate from contact to 1785 is unclear, it was almost certainly not of the order predicted by the Dobyns model. The low population density of the subarctic ensured that even under the worst conditions of the depopulation cycle Cree losses were modest compared to the village tribes. Examining the evidence for losses during the smallpox epidemics of 1780-82, historians have cited impressionistic, retrospective estimates such as David Thompson's 50-60 percent depopulation for northern plains groups, including Cree.¹³ Such catastrophic losses are not borne out by analysis of tribal groups. Admitting the soundness of Denig's estimate of 800 Western Cree lodges in 1780,

Alexander Mackenzie's 1789 total of 620 lodges suggests actual losses, terrible enough, of almost 25 percent.¹⁴

Close examination of plains villagers and nomads reveals a wide variation in historic period population profiles. Losses compounded by military attrition were worst among the settled horticultural tribes, where a number of groups suffered such sustained depopulation in the period 1700-1850 as to threaten their ethnic identity. Among the nomads generalization is more difficult, but the diverse geographical origins of these tribes, as late immigrants from a number of marginal regions, meant sharply different dates of European contact with consequent variations in dates of population nadir. The Plains Cree is an example of a group with sustained European contact in the subarctic forest since the first half of the seventeenth century, a century before significant European contact with many of the plains natives. Because of the ecological

limitations imposed upon Cree population density, they were better able to withstand repeated visitations of disease than the concentrated horticultural populations, while their early contact date meant that population nadir was reached before the end of the eighteenth century. Thus the nineteenth century was a period of Cree population resurgence and of corresponding range expansion at the expense of neighbors still caught in the depopulation cycle.

An argument for a Sioux population history follows, similar in its broad outline and chronology to the case of the Cree. Like the Cree, Sioux-European contact was made early, depopulation was modest compared to the village tribes, and population nadir was reached late in the eighteenth century, leaving the nineteenth century a period of population growth and territorial expansion into ranges weakly held by tribes still enduring depopulation. To justify such a thesis, Sioux



Expansion of the Teton Sioux, 1655-1870.

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population trends in the period after European contact must be examined closely.

Sioux Population Reconstruction, 1655-1785

When French explorers entered the region west of the Great Lakes in the mid-seventeenth century, they heard reports of the Sioux, a powerful group of related peoples occupying a domain extending from the tip of Lake Superior deep into the tall-grass prairies of eastern South Dakota and centering on the upper Mississippi River (see map). A cluster of early estimates, presented in table 1, enables the establishment of a base line Sioux population at first contact with Europeans.

Computed in terms of military capacity, the early estimates broadly concurred in attributing the Sioux with between 7,000 "men" and 9,000 "warriors." Having earlier implied a ratio of four persons for every adult male, this ratio would create a minimum total Sioux population of 28,000 about 1655. The "warriors" would comprise the majority of adult males, excluding the aged, and account for approximately one-fifth of the total population. The upper limit of 9,000 warriors would create a maximum population of 45,000 at contact. Because the highest estimate is that of Fr. Louis Hennepin, an incorrigible exaggerator, we have adopted the more conservative estimate by Pierre Esprit Radisson and propose an approximate "contact population" of 28,000 persons.

Historians have avoided attempting to estimate Sioux contact population until recently. Conrad E. Heidenreich's assessment of 8,000-16,000 Sioux for the early seventeenth century is certainly too low, because his aggregate Sioux population for 1820 totals between 16,000 and 30,000.¹⁵ These figures would imply unique population growth for the Sioux during the seventeenth and eighteenth centuries, indicating that post-contact epidemics had no effect on Sioux demography.

Gary C. Anderson has addressed the issue of the contact Sioux population most systematically.¹⁶ However, his reconstruction of 38,000—comprising 8,000 men,

Table 1. Estimates of Sioux Population, 1660-1805.

Year	Estimator	Total Population	"Men"	"Warriors"	Conversion Ratio ^a	Estimated Population	Remarks
1660 ^b	P. E. Radisson		7,000		1:4	28,000	accepted
1660 ^c	M. C. de Groseilliers		4,000				
1663 ^d	N. Perrot		> 7,000-8,000				
1680 ^e	L. Hennepin			8,000-9,000	1:5	40,000-45,000	too high
1702 ^f	P. C. Le Sueur	4,000 families			1:6	24,000	accepted
1736 ^g	Census of Tribes		300 * >2,000 **				
1764 ^h	Bouquet/Hutchins	21,500		4,300	1:5	21,500	accepted
1766 ⁱ	J. Carver			6,000	1:5	30,000	too high
1767 ^j	W. Johnson			5,000***	1:5	25,000	too high
1786 ^k	Indian Traders		>3,000****		1:4 or 1:5	> 12,000-15,000	accepted
1805 ^l	Z. Pike	22,665				22,665	too high

Notes for Table 1

a. The following ratios have been applied to arrive at the deduced population: Men:persons = 1:4; warriors:persons = 1:5; families:persons = 1:6.

b. "Radisson and Groseilliers in Wisconsin," *Wisconsin Historical Collections* 11 (1888):93.

c. The "sedentary Nadwesserons" or Eastern Sioux only. "Journal of the Jesuit Fathers," in Rueben G. Thwaites, ed., *The Jesuit Relations and Allied Documents: Travels and Explorations of the French Jesuit Missionaries Among the Indians of Canada and the Northern and Northwestern States of the United States, 1610-1791* (1896-1901; reprint, New York: 1959) 45:163.

d. "Memoir on the Manners... of the Savages of North America," in Emma H. Blair, trans. and ed., *The Indian Tribes of the Upper Mississippi Valley and Region of the Great Lakes* (Cleveland: The Arthur H. Clark Co., 1911) 1:170.

e. Louis Hennepin, *A Description of Louisiana*, trans. by John G. Shea (New York: 1880), 203. [Inflated population estimates.]

f. Mildred Mott Wedel, "Le Sueur and the Dakota Sioux," in E. Johnson, ed., *Aspects of Upper Great Lakes Anthropology: Papers in Honor of Lloyd A. Wilford* (St. Paul: Minnesota Historical Society, 1974), 157-71.

g. "1736: Census of the Indian Tribes," *Wisconsin Historical Collections* 17 (1906): 247-48. [* - Eastern Sioux only; ** - Sioux of the Prairies, over 2,000 men.]

h. Estimates of Capt. Thomas Hutchins and Col. Henry Bouquet tabulated in Henry Rowe Schoolcraft, *Information Respecting the History, Condition and Prospects of the Indian Tribes of the United States* (Philadelphia: Lippincott, Grambo and Co., 1853), 3:557-59.

i. John Parker, ed., *The Journals of Jonathan Carver and Related Documents, 1766-1770* (St. Paul: Minnesota Historical Society, 1976), 101.

j. Cited in Gary Clayton Anderson, *Kinsmen of Another Kind: Dakota-White Relations in the Upper Mississippi Valley, 1650-1862* (Lincoln: University of Nebraska Press, 1984), 61. [*** - Though Johnson wrote "men," the context obviously refers to five thousand "warriors."]

k. "Memorial of Indian Traders," in *Wisconsin Historical Collections* 12 (1892): 80-81. [**** - The source does not distinguish the 3,000 persons as being "men" or "warriors."]

l. Elliot Coues, ed., *The Expeditions of Zebulon M. Pike* (New York: Francis P. Harper, 1895), 346-47. [Omission confuses Pike's data. See text note 22.]

11,000 women, and 19,000 children—is too high, being based on unreliable ratios of men to women to children extrapolated from nineteenth-century data such as annuity rolls and vaccination censuses. Annuity rolls frequently padded the fig-

ures of dependents, while vaccination statistics skew the proportion of children upwards, because they were most at risk from continued exposure to disease.

Having proposed a contact population figure, the next important count is for

about 1700, when the experienced trader Le Sueur calculated the Sioux totaling 4,000 families.¹⁷ Because the unit of residence, the lodge or tipi, housed two families, or ten to fifteen persons, we assess an average of six persons per family and a total population of approximately 24,000. This reconstruction receives some support from the implied total of approximately 2,000 tipis since Le Sueur's attribution of over 1,000 lodges to the Western Sioux divisions may well be a shorthand way of stating that the western divisions accounted for over 50 percent of the total Sioux population.

A 1700 population of 24,000 Sioux suggests a 14 percent decline in the forty-five-year period since contact (0.31 percent per annum), suggesting the Sioux had indeed entered a period of disease-based depopulation. Unfortunately, although the epidemic history of the Great Lakes basin is understood in outline, the Sioux domain remained at the edge of European perceptions throughout the French period (1655-1763). Consequently, little hard evidence exists to identify actual epidemics affecting the Sioux.¹⁸

A second group of estimates from table 1 cluster in the mid 1760s, representing British interest in assessing Indian strength in lands won from the French after the Seven Years' War. The estimates range from 4,300 to 6,000 warriors, indicating a population of 21,500-30,000. Comparison with the contact period spread indicates a decline in population of approximately 30 percent between 1655 and 1765. Because the highest figure is Jonathan Carver's, which he saw fit to reduce drastically in composing his published *Travels*, we adopt the lower assessment of 21,500 persons (including 4,300 warriors), also accepted by Helen H. Tanner in her authoritative survey of Great Lakes tribes.¹⁹ The 21,500 figure indicates continued population decline after 1700 but at a somewhat lower rate (0.16 percent per annum).

After the American War of Independence, British companies sought to make the most of their influence among the western tribes and aggressively carried trade beyond the Eastern Sioux to their

Yankton and Teton relatives. This intensified activity is reflected in the 1786 "Memorial of Indian Traders." In attempting to assess Sioux strength the traders asserted "that at various times they have seen not less than 3,000 [men] of different [Sioux] tribes."²⁰ This figure plainly represented a minimum, because several Teton bands remained outside the British sphere, but the rapid drop from 4,300 warriors within a generation is marked enough to indicate severe losses.

The principal cause of these losses was undoubtedly the terrible smallpox epidemics of 1780-82, serious enough to be depicted in all the Sioux winter counts and remarked upon by observers as especially virulent. The epidemics were probably the greatest single blow to Sioux numbers during the depopulation period. Continuing the rate of depopulation at 0.16 percent per annum from 1764 until 1780 yields a provisional estimate of 20,900 Sioux on the eve of the epidemics. The "Memorial" estimate indicates the population in 1786 exceeded 12,000-15,000. Anticipating our nineteenth-century analysis, by 1805 Sioux numbers totalled approximately 18,800 and were growing, suggesting depopulation nadir was reached in the immediate aftermath of the 1780-82 epidemics. Back projection of 1805-25 growth rates established below would yield a nadir population in 1785 of 17,000 persons. Because population recovery was a halting process, slow to start and subject to localized reverses, we propose a population in 1785 of 17,500, representing a total depopulation of 38 percent in the 130 years since contact, with losses of 16 percent during the single cluster of epidemics in 1780-82. Although the depopulation rate is far below that suggested by Dobyns, his prediction of population stabilization and growth beginning 130 years after contact seems borne out in the case of the Sioux.

By 1785 the Sioux had completed the postcontact cycle of disease and depopulation. Sioux numbers grew in the period 1785-1880, despite localized losses in many recorded nineteenth-century epidemics, suggesting critical immunities

had been acquired and a variety of strategies had been devised to combat disease. Like the Crees to their north, the Sioux were now at a huge demographic advantage over tribes still caught in the cycle of decline. In a westward advance into lands held by once powerful groups suffering depletions in strength far exceeding the comparatively modest losses sustained by the Sioux, the vanguard was formed by the Teton ("Prairie Village") divisions. As nineteenth-century historical sources grow in quantity and quality, and these divisions crystallized into the classic seven Teton "tribes" (Brulé, Oglala, Miniconjou, Two Kettles, Sans Arc, Sicasapa, and Hunkpapa), we shall focus on Teton population trends to examine the demographic underpinning of a burgeoning, expansionist tribal society extending its control into territories held by peoples in decline.

Teton Sioux Population Reconstruction, 1785-1881

With the beginning of the American period on the plains, there is a growing body of data on Sioux population, enabling more detailed, divisional breakdowns. First, however, a base line Sioux population for the beginning of the nineteenth century must be established, together with figures for the Tetons and their constituent divisions.

In 1805 three important assessments of Sioux population were made by U.S. explorers Zebulon Pike and William Clark (see table 2) and by trader Pierre-Antoine Tabeau. The explorers were armed with tribal estimates furnished by the St. Louis trading community, but, faced by the sheer scale of Sioux numbers, contradictory assessments were made. One trader rated all the Sioux at 12,000 persons, while another reckoned 11,000 Tetons alone. Clark chose to select the lowest counts, and the computations tabulated in his "Statistical View of the Indian Nations" yielded a total Sioux population of 8,310, including 2,910 Tetons (35 percent of total).²¹ Pike's estimates total 22,665 Sioux, including 11,600 Tetons (51 percent of the total). Tabeau, an experienced

Teton Sioux Population

Table 2. Estimates of Teton Sioux Population by Tribal Divisions, 1805-1881.

Year	Brulé	Oglala	Miniconjou	Two Kettle	Sans Arc	Sihasapa	Hunkpapa	Total
1805^a								
Men/Warriors	300	120	250		300	omitted		970
Lodges	120	50	100		120	"		390
Total population	900	360	750		900	"		2,910
% of total	31	12	26		31	"		100

Remarks: too low too low too low Sans Arc/Hunkpapa combined; too low too low

1825^b								
Men/Warriors	600	300	800				300	2,000
Lodges								
Total population	3,000	1,500	4,000				1,500	10,000
% of total	30	15	40				15	100

Remarks: Miniconjou, Sans Arc, and Sihasapa combined accurate

1833^c								
Men/Warriors								
Lodges	500	300	260	100	100	220	150	1,630
Total population								
% of total	31	18	16	6	6	14	9	100

Remarks: ratio of lodges to persons = 1:5 too low

1839^d								
Men/Warriors								
Lodges	300	300	180	80	110	100	100 +	1,170 +
Total population								
% of total	26	26	15	6	9	9	9	100

Remarks: too low Two Kettle lodges were a part of the Broken Arrow, a Miniconjou band. too low

1840^e								
Men/Warriors								
Lodges	260	250	150	100	100	200	250	1,310
Total population								
% of total	20	19	10	8	8	16	19	100

Remarks: too low ratio of lodges to persons = 1:10

1850^f								
Men/Warriors								
Lodges	500	400	270	60	250	450	320	2,250
Total population								
% of total	22	18	12	3	11	20	14	100

Remarks: ratio of lodges to persons = 1:10 too high much too high

1853^g								
Men/Warriors								
Lodges	150	omitted	225	165	160	150	280	1,130
Total population								
% of total	13 *		20	15	14	13	25 **	100

Remarks: see note; ratio of lodges to persons = 1:8

Notes for Table 2

a. Meriwether Lewis and William Clark, "A Statistical View of the Indian Nations Inhabiting the Territory of Louisiana and the Countries Adjacent to its Northern and Western Boundaries," *American State Papers: Indian Affairs* 1:712.

b. Roger L. Nichols, ed., "General Henry Atkinson's Report of the Yellowstone Expedition of 1825," *Nebraska History* 44 (June 1963): 74-76.

c. Edwin T. Denig, *Five Indian Tribes of the Upper Missouri: Sioux, Arickara, Assiniboines, Crees, Crows*, John C. Ewers, ed., (Norman: University of Oklahoma Press, 1961), 14-15. [Denig used a deflationary lodges:persons ratio of 1:5.]

d. Edmund C. Bray and Martha C. Bray, trans. and ed., *Joseph Nicollet on the Plains and Prairies: The Expedition of 1838-39 with Journals, Letters, and notes on the Dakota Indians* (St. Paul: Minnesota Historical Soc., 1976), 260-62.

e. Stephen R. Riggs, "Journal of a Tour from Lac-qui-Parle to the Missouri River," *South Dakota Historical Collections* 13 (1926): 340.

f. Thaddeus A. Culbertson, "Journal of an Expedition to the Mauvais Terres and the Upper Missouri in 1850," John F. McDermott, ed. *Smithsonian Institution Bureau of American Ethnology Bulletin* 147 (Washington: 1952), 135-36.

g. A. G. Vaughan report in *Annual Report of the Commissioner of Indian Affairs for 1853* (Washington: 1853), 113 (hereafter *Annual Report*). [* - Only Lower Brulés were counted in this estimate, which enumerates divisions within the Upper Missouri Agency. It therefore omits the Platte-based Upper Brulés and Oglalas. ** - The estimate for the Hunkpapa is low, which possibly reflects the omission of a Hunkpapa band rejecting treaty annuities and not included in the agency lodge count.]

Table 2 continued on following page...

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Table 2. cont.

Year	Brulé	Oglala	Miniconjou	Two Kettle	Sans Arc	Silhasapa	Hunkpapa	Total
1855 ^h								
Men/Warriors	[768]	[576]	320 + [262]	160	272	264	584	3,206
Lodges	480	360	200 + 164	100	171	164	365	2,004
Total population	[3,840]	[2,880]	1,600 + [1,312]	800	1,360	1,320	2,920	16,032
% of total	24	18	10 + 8	5	9	8	18	100

Remarks: see note about numbers in brackets; ratio of lodges to persons = 1:8

1866ⁱ

Men/Warriors								
Lodges	200	350	370	200	280	220	300	1,920
Total population	1,200	2,100	2,200	1,200	1,680	1,320	1,800	11,500
% of total	10	18	19	10	15	12	16	100

Remarks: Lower Brulés only too low too high ratio of lodges to persons = 1:6

1869^j

Men/Warriors								
Lodges								
Total population	3,000	2,000	2,000	1,500	1,500	900	2,000	12,900
% of total	24	15	15	12	12	7	15	100

Remarks: too low too low

1875^k

Men/Warriors								
Lodges								
Total population	10,221	9,136	4,006	2,261	1,778	1,749	2,500	31,651 + 3,000 "hostiles"
% of total	29	26	12	7	5	5	7	91 + 9 "hostiles"

Remarks: inflation rampant

1881^l

Men/Warriors								
Lodges								
Total population	9,207 *	7,202	1,290	759	870	1,094	1,620 **	22,042
% of total	42	33	6	3	4	5	7	100

Remarks: inflated inflated accurate accurate accurate accurate
See note

trader, unfortunately did not provide a total population figure, but he did compute Sioux strength as "at least four thousand men bearing arms."²² Applying the ratios established above, a total population between 16,000 and 24,000 is suggested, significantly of the same order as Pike's estimate but two or three times that of Clark's.

For too long our view of northern plains demography has been distorted by the national mystique associated with the Lewis and Clark Expedition. In particular,

Clark's gross underestimate of Sioux numbers has to be recognized and replaced by a more plausible, reasoned estimate. The "Statistical View" figures contradict both Pike's and Tabeau's contemporary estimates and Clark's own subsequent revisions, and, when compared with the first reliable reservation head counts, would establish Sioux population growth in 1805-80 at over 220 percent, a phenomenon unmatched elsewhere in native North America. George E. Hyde's defense of the

h. Lt. G. K. Warren, MS "Journal," New York State Library, Albany; and idem, *Preliminary Report of Explorations in Nebraska and Dakota in the Years 1855-'56-'57* (Washington: 1875), 48. [Figures in brackets indicate numbers reconstructed from Warren's explicit lodges; people ratio of 1:8, and are based on his "Journal" lodge totals. These differ from his published report in: (a) including the Eat No Dogs, a band normally associated with the Miniconjous, as a separate tribal division (Eat No Dogs total of 164 lodges implying 262 men and 1,312 band total); (b) omitting about 100 lodges of Oglalas, which he probably counted as part of the Eat No Dogs; and (c) providing a more realistic Brulé estimate than the *Report's* 380 lodges.]

i. "Report of the Northwest Treaty Commission," in *1866 Annual Report*, 175.

j. Maj. D. S. Stanley report in *1869 Annual Report*, 330-31.

k. Edward P. Smith, *1875 Annual Report*, 90-92.

l. *1881 Annual Report*, 274-76. [* - Brulé population figure includes all Tetons enumerated at Rosebud and Lower Brulé agencies. ** - Hunkpapa head count of 1,224 at Standing Rock Agency omitted about 400 unsundered Hunkpapa.]

Clark figures by invoking heavy Eastern Sioux out-migration to the Tetons after 1805 is unacceptable because the "Statistical View" estimates are unaccountably low for all Sioux, not only for the Teton divisions.²³

Establishing a nineteenth-century base line population depends on explaining Clark's errors. After examining the comparative data, the flaws in his methodology become evident. Clark's principal informants were employees of Regis Loisel,

Teton Sioux Population

a St. Louis trader with extensive Sioux connections. Unfortunately the most experienced of these men, Pierre Dorion, was a poor informant. His partial listing of Sioux divisions was a lazy, hasty account omitting important groups.²⁴ Significantly, his rating of one constituent band of the Yankton Sioux at "200 men" was used by Clark as his basis of computation for the entire Yankton division. Therefore, the "Statistical View" figures fail to account for a second band of Yanktons actually named in the tabulation, as well as for a third band classified by Tabeau as Yankton but omitted entirely by Clark. Moreover, Clark depressed the total population further by adopting a highly conservative ratio of persons to men (3.5:1), creating a total Yankton population of 700. We may assume he undervalued the Yankton, at least, by well over 100 percent.

For the Yanktonai division, relatives of the Yankton in the Middle Sioux geographical grouping, we have an estimate by Tabeau of 260 lodges. Using Tabeau's own carefully formulated calculations of two and one-half men per lodge and the standard four to one ratio of persons to men, provides a Yanktonai population of 2,600 persons, including 650 men. Significantly, in Clark's draft manuscript he originally entered the Yanktonai population as 2,500 but he chose to delete it in the belief that traders' estimates should be "deduct[ed] about one third generally."²⁵ As a cautious observer, Tabeau rounded down his estimate to 500 men. Clark adopted this conservative figure, then contrived an even more conservative persons to men ratio (3.2:1) to create a total Yanktonai population of 1,600, almost 40 percent lower than the figure reconstructed from Tabeau. Clark entirely discarded Tabeau's lodge count, probably the single soundest figure in the entire calculation, and replaced it with his own 200 lodges (not based on observation of any Yanktonai camps), thus creating unreliable ratios of men to persons to lodges.

Further shortcomings are evident in Clark's handling of Teton data. The "Statistical View" represents the Brulé Tetons as numbering 900 persons, including 300

men, in 120 lodges. The ratio of three to one is even more deflationary than his Middle Sioux calculation and is anyway based upon a false accounting of adult males. Tabeau, trading in the main Brulé winter camp one year before Clark wrote, remarked on an incident involving "*plus de 400 hommes*."²⁶ In all likelihood the whole Brulé tribe was not present, yet such a figure subjected to realistic ratios yields a village population in excess of 1,600 persons. In 1804 Lewis and Clark themselves reported three main Brulé camps, totaling 200 lodges, or 2,000 persons, double Clark's divisional total.²⁷ Because more Brulés were reported in small camps along the Missouri, any realistic appraisal of the Brulés in 1805 must more than double Clark's assessment.

Teton numbers are further depressed by simple omission. Clark entirely omits from his calculations the Siasasapa division, presumably because of the ambivalence of Siasasapa political affiliations at this time. Although classically considered a Teton division, their first contemporary report, in Tabeau's tabulation, rates the "Seascape" as a band of the Yankton Sioux.²⁸ Clark himself drastically revised upwards his Sioux estimates in later years. In his 1814 master map of the American West, he raised his aggregate Sioux population from 8,310 to 9,300 (excluding the Yanktonai). In 1815 he revised upwards again to propose 16,000 persons, including 4,000 warriors.²⁹

Enough has been said to require drastic revision of the Clark figures. By contrast Tabeau's careful grading of both Sioux and Arikara bands by size leaves us confident that his estimate of the Sioux as comprising "at least four thousand men bearing arms" merits respect. Such an estimate agrees in order of magnitude with Pike's total Sioux population. To arrive at a satisfactory reconstruction, we accept the approximate accuracy of Pike's observed figures for the Eastern Sioux and assign a round 5,800 to the four Eastern divisions (Pike's corrected figures aggregating 5,865). We also follow him in assigning 5,200 to the two Middle Sioux divisions. Since Tabeau establishes

Yanktonai population at 2,600, the Yanktons, including the then-associated Siasasapa, constitute another 2,600 persons. Because of their historic association with the Tetons, we omit the Siasasapa from the Middle Sioux total and count them as Tetons. Rated by Tabeau the smallest of three Yankton bands, the Siasasapa approximated 700 persons, correcting the Yankton population in 1805 to some 1,900.

Only with the Tetons do we question the substance of Pike's findings. His ratio of 2,000 Teton "warriors" to 11,600 persons (5.8:1) is out of line with the standard four or five to one ratios most commonly used. His estimate of 600 Teton lodges creates a persons per lodge ratio of almost twenty to one, unacceptably high in light of our examination of the downward trend in lodge ratios. Pike's unrealistic estimates reflect his relative unfamiliarity with the Teton range from his Mississippi-based explorations. His lodge total may be derived from reports of the annual Sioux trade fair, which was attended by most but not all Teton bands.³⁰ With a partial lodge total corrected to 6,000 persons and a warrior total implying numbers in the 8,000-10,000 range, we propose a total Teton population, including the Siasasapa, of 8,500 persons in 1805. This creates a Sioux grand total of 18,800, falling near the middle of the range of expectations created by Tabeau's computation, of which the Tetons constituted 45 percent. Although the proportion of Tetons to other divisions grew steadily throughout the nineteenth century (to reach 60 percent by 1881), this reconstruction gains further credence from rule-of-thumb trader assessments, which consistently estimated the Tetons at roughly half of all Sioux.³¹

It remains to approximate Teton divisional population in 1805. In the absence of other contemporary tabulations we have preserved Clark's proportions of relative size and applied them to the reconstructed total of 8,500. Using standard ratios yields the results presented in table 3. This breakdown provides a divisional base line for the nineteenth century. In

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order to establish a terminal base line we have selected 1881 as the year the last of the Tetons surrendered and were enrolled on the "Great Sioux Reservation." All Sioux were then concentrated at agencies or otherwise controlled within the dominant white society, where enforced acculturation was in operation, foreclosing further Teton territorial expansion.

Unfortunately, in 1881 Sioux population assessments had not yet progressed to the level of uniform census procedures at all agencies, and the aggregate Teton population in the annual report of the commissioner of Indian affairs, 22,042, cannot be accepted uncritically. Beginning in 1868 Tetons had been subjected to the reservation system, as traditional nomadic lifeways became increasingly restricted by the expansion of white settlement. Resident agents were sent to administer affairs, but although their responsibilities included careful population assessments, they proved largely incapable of obtaining accurate counts. A collation of agency statistics for 1875 (table 2) asserts a Teton population of 34,651.

It is evident from the estimates in table 2 that such a figure exceeds by over 100 percent the estimates in official reports immediately preceding the reservation period. These estimates were derived from calculations by experienced members of the white trading community. As such they merit real, if critical, respect. Furthermore, the 1875 figures again exceed by over 100 percent the counts conducted under census procedures by Indian Bureau personnel in 1887-95, when Teton totals stabilized at approximately 16,000.

The early reservation period estimates are anomalous. John S. Gray demonstrated the methodological flaws in their assessment in an important essay, identifying a number of factors relevant to population inflation.³² Indians and agents alike inflated calculations, because government rationing and annuity payments were based on the estimates. The extreme fluidity of agency populations before 1876 frustrated establishing even workable estimates, because many bands shuttled between two or more agencies and the hunt-

Table 3. Reconstructed Teton Sioux Population by Tribal Divisions, 1805-1881.^a

Year	Brulé	Oglala	Miniconjou	Two Kettle	Sans Arc	Sihhasapa	Hunkpapa	Total
1805								
Men	600	250	500		200	175	400	2,125
Women	840	350	700		280	245	560	2,975
Children	960	400	800		320	280	640	3,400
Lodges	240	100	200		80	70	160	850
Total population	2,400	1,000	2,000		800	700	1,600	8,500
% of total	28	12	24		9	8	19	100

Remarks: All Miniconjou figures before 1849 include incipient Two Kettle division.

1825

Men	750	375	525		225	225	375	2,475
Women	1,050	525	735		315	315	525	3,465
Children	1,200	600	840		360	360	600	3,960
Lodges	375	190	260		105	100	165	1,185
Total population	3,000	1,500	2,200		900	900	1,500	10,000
% of total	30	15	22		9	9	15	100

1839

Men	865	565	520		220	220	440	2,830
Women	1,205	785	725		310	310	620	3,955
Children	1,380	900	835		350	360	710	4,535
Lodges	460	300	260		110	100	200	1,430
Total population	3,450	2,250	2,080		880	890	1,770	11,320
% of total	30	20	18		8	8	16	100

1849

Men	875	700	470	100	225	245	560	3,205
Women	1,225	980	660	150	355	345	785	4,500
Children	1,400	1,120	760	170	405	390	895	5,140
Lodges	500	400	270	60	145	140	320	1,835
Total population	3,500	2,800	1,890	420	1,015	980	2,240	12,845
% of total	27	22	15	3	8	8	17	100

1855

Men	780	740	425	160	275	265	585	3,230
Women	1,090	1,030	600	225	380	370	815	4,510
Children	1,250	1,180	690	265	435	420	930	5,170
Lodges	480	455	265	100	165	160	360	1,985
Total population	3,120	2,950	1,715	650	1,090	1,055	2,330	12,910
% of total	24	23	13.5	5	8.5	8	18	100

1865

Men	825	860	430	260	305	260	525	3,465
Women	1,155	1,200	600	365	425	365	735	4,845
Children	1,320	1,370	690	425	490	415	840	5,550
Lodges	530	550	275	170	195	165	335	2,220
Total population	3,300	3,430	1,720	1,050	1,220	1,040	2,100	13,860
% of total	24	25	12	8	9	7	15	100

Teton Sioux Population

Table 3. cont.

Year	Brulé	Oglala	Minitonjou	Two Kettle	Sans Arc	Sihhasapa	Hunkpapa	Total
1870								
Men	1,010	900	405	250	290	265	475	3,595
Women	1,415	1,260	565	345	410	370	660	5,025
Children	1,625	1,440	650	395	470	415	755	5,750
Lodges	675	600	270	165	195	175	315	2,395
Total population	4,050	3,600	1,620	990	1,170	1,050	1,890	14,370
% of total	28	25	11.5	7	8	7.5	13	100

1881

Men	1,425	1,200	325	185	215	275	405	4,030
Women	1,995	1,680	450	260	305	380	565	5,635
Children	2,280	1,920	515	295	350	435	650	6,445
Lodges	950	800	215	125	145	180	270	2,685
Total population	5,700	4,800	1,290	740	870	1,090	1,620	16,110
% of total	35	30	8	5	5	7	10	100

ing ranges still dominated by Tetons ideologically opposed to government counts.

The Sioux War of 1876-77 changed this state of affairs. The military assumed control of the agencies and conducted enforced head counts of "friendly" camps and of the surrendering "hostiles." By 1881 such procedures were effectively standardized at the Missouri River agencies, Lower Brulé, Cheyenne River, and Standing Rock. Thus the 1881 statistics in the commissioner's annual report (table 2) have been accepted as broadly accurate for these agencies. Only minor modifications have been made in the 1881 reconstruction figures in table 3. At Cheyenne River Agency Two Kettle divisional figures have been slightly depressed to avoid duplication with tribesmen enrolled at Rosebud. To the Standing Rock Agency statistics must be added a number of free Hunkpapas not enrolled when counts were made in July 1881. These comprised Sitting Bull's camp of 187 persons and another of thirty-five families, approximately 210 persons, which remained in postwar exile in Canada. Mild inflation is evident at Lower Brulé Agency. Over the previous four years counts showed a stable population, ranging from 1,160 to 1,247. The 1881 count of 1,509 is anomalous because the observable trend through the 1880s is one of modest decline, to 1,040 in 1890. The

reconstructed population is represented by a round figure estimate of 1,200. These adjustments establish a Teton population at the Missouri agencies of 7,559.

At the southernmost and largest agencies, Rosebud (Upper Brulé) and Pine Ridge (Oglala), inflationary factors were still operative in 1881. Here the estimates totaled, respectively, 7,698 and 7,202. At Pine Ridge estimates of this magnitude continued until 1886, curiously unadjusted after the enrollment of approximately 600 persons transferred from Standing Rock in 1882. After the removal of Agent Valentine T. McGillicuddy a military-conducted census established an Oglala population of 4,873.³³ This figure stabilized until 1891, when significant numbers of Tetons were transferred to Pine Ridge from other agencies. An 1881 Oglala population of 4,800 is represented in table 3, including 556 persons already counted among the so-called "hostiles" temporarily concentrated at Standing Rock. Added to the Missouri-based Tetons, a new subtotal of 11,780 emerges.

Only the Upper Brulé population at Rosebud remains to be adjusted. Here resumed inflation was compounded by significant in-migration through official transfer, surrenders, and the desertion of disaffected people from the Missouri agencies. Duplication of enrolled people

Note for Table 3

a. Major sources are Lewis and Clark, "Statistical View," 712, and Coues, *Pike Expedition* 1:346-47 [1805]; "Atkinson Report," 74-76 [1825]; *Nicoller on the Plains*, 260-62, and Riggs, "Journal," 340 [1839]; Culbertson, "Journal," 135-36 [1849]; Warren, "Journal," and *Preliminary Report*, 48 [1855]; Col. W. O. Collins Report, 1865, in Agnes W. Spring, *Caspar Collins: The Life and Exploits of an Indian Fighter of the Sixties* (New York: Columbia University Press, 1927), 164-66; and Commissioner of Indian Affairs *Annual Reports* for 1866, 1869, 1870, and 1881.

was highly likely. Although some in-migration persisted through the 1880s, the count of 1890 established a Rosebud population of 4,650. All factors considered, we reconstruct an 1881 Upper Brulé population of 4,500, again including 170 persons already counted as surrendered at Standing Rock. This creates a reconstructed total Teton population in 1881 of 16,110 (table 3). Similar calculations suggest the Tetons then constituted some 60 percent of a grand total Sioux population of approximately 27,000 (graphs 1 and 2). At this time agency populations of the two Middle Sioux divisions had stabilized at about 2,000 (Yankton) and 4,000 (Yanktonai), while the four Eastern Sioux divisions, including significant numbers living in Canadian exile, totaled up to 5,000 persons.

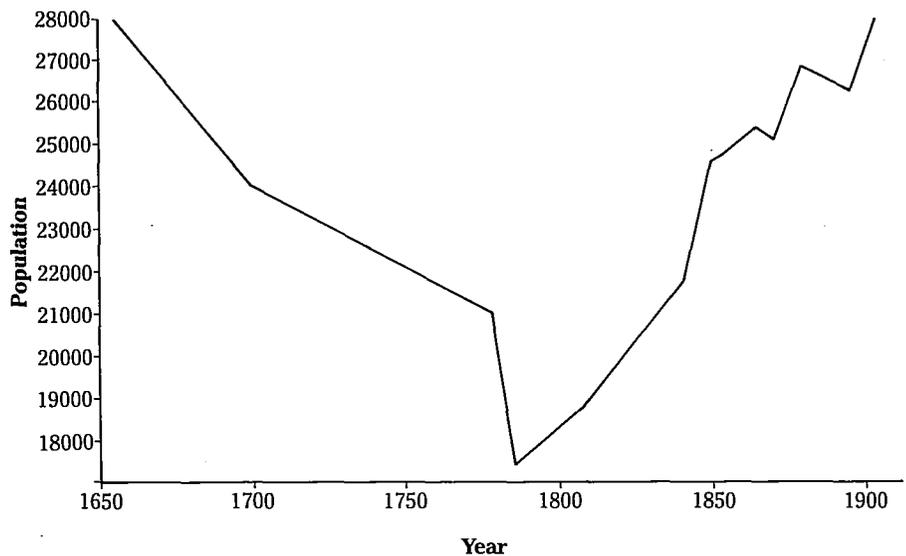
The reconstructed figures in table 3 are not offered as precisely accurate. However, they establish orders of magnitude that should be broadly correct. Even at the problematic southern agencies, the margin of error in our reconstruction should be within 5 percent. Having established initial and terminal base lines for our analysis, the dynamics of Sioux population in the period 1805-81 can be assessed. The statistics demonstrate clearly that significant population growth was the major theme of the period. Total Sioux

population grew by approximately 45 percent. Sharp distinctions exist, however, when this figure is subjected to a divisional breakdown. Until the Santee exile from Minnesota in 1862, the joint population of the four Eastern Sioux divisions was roughly static at about 5,500, declining significantly in the wake of war and diaspora. The joint population of the two Middle divisions was marked by net growth of about 40 percent until implementation of the reservation system, with numbers stabilizing at about 6,000 by 1870. Breaking down these Middle Sioux figures again, however, suggests that while Yankton numbers grew by 18 percent, Yanktonai numbers grew by three times as much.

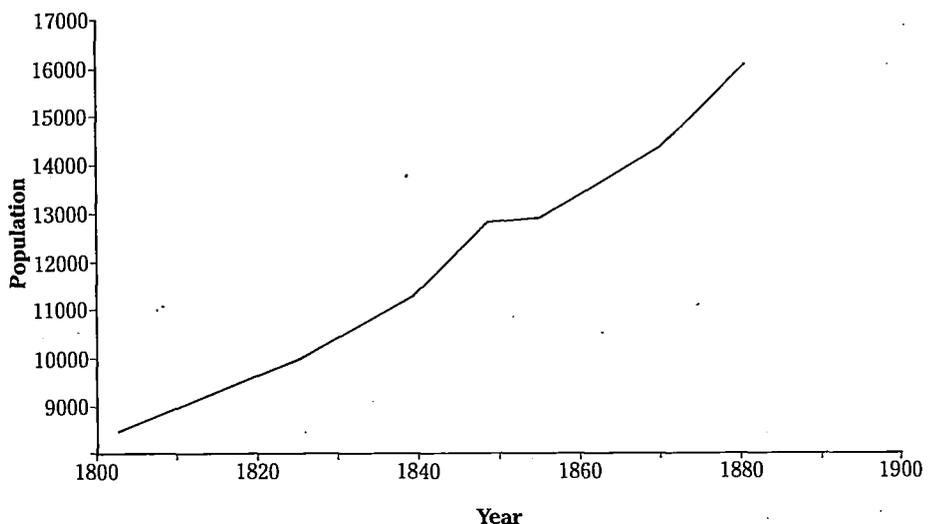
The Tetons enjoyed the most sustained growth, running at 90 percent, fully twice the Sioux standard rate. Confinement to reservations brought an immediate stabilization of Teton population as it had done for the Middle Sioux. Although detailed analysis of modern demographic trends is beyond our present intention, the freezing of Sioux population lasted only to the end of the nineteenth century. Government figures covering the period 1895-1925 indicate a Sioux growth rate comparable to that of the preservation period.³⁴ Growth has continued to characterize twentieth-century population trends.

Clearly different rates of growth probably do reflect, in part, real divisional differences in birth and death rates. Tetons who made a full transition to become equestrian buffalo hunters enjoyed a vastly improved standard of living that allowed for higher birth rates (with women freed from excessive burden carrying) and lower mortality rates (as the practice of abandoning aged, infirm camp members became morally unacceptable) than prevailed among the Santee Sioux.³⁵ Comparative Santee sedentism may have resulted in continued vulnerability to disease. Nevertheless, it is unlikely that the stark differences in growth rates evident in our reconstructions can be entirely accounted for in this way.

Rather, we postulate an ongoing "drain" of Sioux population from east to



Graph 1. Total Sioux Population, 1655-1905.



Graph 2. Total Teton Population, 1801-1881.

west in the direction of greater game resources and enhanced economic security. On this model cumulatively significant numbers of Eastern Sioux chose to join relatives in the west as individuals engaged in out-marriage or as members of organized camps shifting deeper into the buffalo range. Logically, the two Middle Sioux divisions acted as the primary destination of such movements. Consideration of their respective population profiles suggests that the rapidly growing Yanktonai

assimilated comparatively large numbers of such immigrants, consistent with their aggressive expansion across the mixed-grass prairies, while the Yankton steadily redistributed new local surplus members westward to the Tetons through the same mechanisms of individual out-marriage and organized camp movement.

Different rates of population growth indicate these mechanisms also characterized Teton demographics at the divisional level. If we assume for the Tetons broadly

Teton Sioux Population

uniform birth and death rates throughout the period 1805-81, as is indicated by the relative homogeneity of their high plains environment and the essential unity of their cultural response to its ecological requirements, then it becomes possible to employ the reconstructed population estimates of each division (table 3).

After first considering the demographic and geopolitical dimensions of Teton expansion, we profile each of the seven tribal divisions and examine their participation in the phenomenal growth that characterized the nineteenth-century Teton. By isolating gross localized growth and loss rates and adjusting for known local losses to disease and war, the "Population Profiles" section identifies the direction and magnitude of "drain" from division to division as the Tetons competed with other tribes and, ultimately, with the United States in a constant struggle to control access to resources—buffalo herds, horses, pasture, and trade.

Teton Expansion

In 1655, 28,000 Sioux occupied an exclusive domain of approximately 60,000 square miles. Population density approached densities associated with some horticultural tribes. Because Sioux farming was marginal, the intense use of wild rice in the northeastern half of the domain is indicated.³⁶ Several factors contributed to a southward and westward shift in the Sioux domain in the early contact period: depopulation onset; the need to defend southern ranges from intrusive tribes displaced by the Iroquois Beaver Wars; deteriorating relations with the Cree-Assiniboin alliance supplied with English firearms after 1670; and access to French trade on the lower Mississippi, 1687-95. Suspension of French trade also hastened Sioux movement from the woodlands, four village-based bands (including the Oglala) crossing west of the Mississippi between 1695 and 1700 alone.³⁷ Although trade was resumed in 1726-37 and 1750-56, many Sioux never returned to the Mississippi Valley, possibly deterred by human and animal epidemics.³⁸ This process was compounded after war opened with

the Chippewas in 1736, resulting in Eastern Sioux relinquishment of the major ricing regions by 1768.

An increasing number of Sioux joined western relatives hunting the buffalo herds of the tall-grass prairies, an ecological adaptation entailing drastic reductions in population density. Despite 38 percent depopulation in 1655-1785, the Sioux domain expanded by 30 percent, resulting in a significant reduction in population density and suggesting the possibility that territorial expansion was, among other things, itself a strategy for counteracting the effects of recurring epidemics.

Expansion was aimed westward onto the prairies weakly held as hunting range by horticultural tribes suffering worse depopulation than the Sioux, in particular, the Iowa, Omaha, and Ponca in 1680-1750, and the Cheyenne, Arikara, Mandan, and Hidatsa in the late eighteenth century. The nature of this expansion is poorly understood, but it involved a judicious blend of diplomacy and force. A general pattern can be seen of joint land-use truces contracted between individual villages and Sioux bands, characterized by trade, intermarriage, and occasionally temporary residence of whole bands at village locations. Truteau's account of Teton-Arikara relations in 1795 demonstrated this pattern at work. A Teton band, probably the Miniconjou proper, was living at the Arikara villages throughout Truteau's stay. His characterization of them as "really the only friends of the Ricaras, having the same sentiments and character," indicated a lengthy period of intermarriage. By fall they were joined by other Teton bands, who traded British goods to the Arikaras to legitimize winter hunting on Arikara lands. Similar processes probably characterized earlier Teton-village alliances, such as those between the Oglalas and the Arikaras and between certain Brulés and the Poncas, resulting in the emergence of the hybrid Wazhazha band.³⁹ Territorial claims were established, to be asserted by force when truces broke down. Interband Sioux war parties might concentrate their activities in a region for several successive seasons,

swiftly reducing "neutral grounds" first to war zones and then to exclusive Sioux domain.

Through this process by 1785 the Teton Sioux divisions had shifted their core ranges from Minnesota to dominate the east drainage of the Missouri River in South Dakota. Through intertribal trade and raiding they had acquired growing herds of horses derived from the Spanish settlements of New Mexico, which intensified their nomadic culture by increasing mobility and hunting efficiency, enhancing military capacity, and permitting higher standards of living through improved transportation. Greater subsistence security encouraged the regular aggregation of larger groups, a process probably initiated during the depopulation period through band fusion. Certain Teton bands, coalescing seasonally as the Brulé and Oglala "tribes," had already established access to the trans-Missouri high plains through joint use accords with village groups.

Farther north other Teton bands were undergoing similar processes and emerging as the Miniconjou and Saone tribes. These incipient tribal polities were integrated by rituals and associations both existing (for example, through the calumet adoption rite) and innovative (through Sun Dance and warrior societies) and were capable of sustained military activity against village peoples suffering continuing depopulation as Sioux numbers began to grow.

The period 1785-1825 was marked by approximately 25 percent Teton growth and saw the consolidation of the Teton hold on the Missouri. The Arikaras were reduced to two faction-torn villages effectively dominated by the Sioux. At harvest time Arikaras were forced to trade surplus crops at rates set by Teton visitors, whose camps prevented Arikara access to buffalo. When the Arikaras won a key position in the expanding St. Louis-based fur trade, Teton bands united to drive them onto the prairies, forcing Arikara relocation above the Grand River.⁴⁰ After 1796 Tetons were able to establish direct relations with Euroamerican traders, free of

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Eastern Sioux and village tribe middlemen. Band leaders, emergent "chiefs," acted as intercultural brokers in formal if frequently stormy relations with white traders and later government representatives. Variable access to trade, competing summer tribal activities, and population growth all furthered fluidity of movement across divisional lines and caused proliferation of tribal polities. Under these processes the Saone tribe attracted to its seasonal locus of ceremonial activity the Sihasapa, rated a Yankton band in 1805, but under population pressure this amalgamation proved unwieldy. Of the constituent Saone bands, the Hunkpapa and Sihasapa drew closer together, while the Sans Arcs shifted into a growing association with the Miniconjous by about 1820.

In 1823 several Teton bands allied themselves with the new American trading community and the U.S. Army in once more driving out the Arikaras, their strategy possibly connected to a Teton determination to control the flow of the plains-wide Indian horse trade and so win the role of suppliers to the fur companies. After 1825 population stresses, the native horse trade, and the expansion of the American fur trade contributed to important tribal range shifts on the high plains. The Cheyennes, the Tetons' closest allies and a key link in the horse trade, moved southward from the Black Hills into the upper Platte River drainage. Behind their Arapaho allies they moved into the vacuum left by southward-moving Comanches, victims of sustained depopulation throughout the nineteenth century.

The availability of warmer southern ranges with better pasture and direct access to wild horse herds became an important factor in Teton expansion. The southward pull was first felt by the Oglalas, who took advantage of trading opportunities presented by the establishment of Fort Laramie in 1834 to relocate to the North Platte, turning their military attention downstream to Pawnee villages still suffering critical depopulation. Growing numbers of Brulés, cohering as a separate Upper Brulé tribal division, followed the Oglala shift and took over lands along

the lower North Platte that included wild horse ranges in the Nebraska Sand Hills. Miniconjous seasonally moved down to the Platte to obtain horses, placing themselves in an important supply role to those Tetons remaining in the Missouri Valley.

By the 1830s the U.S. was extending its administrative control over the Plains Indians and still enjoyed a positive if complex relationship of apparent equality with the



Standing Elk, Yankton. (NSHS-R539:14-1)

Tetons. A significant example of this relationship was the vaccination program of 1832, when a humanitarian vaccination act was implemented to prevent further outbreaks of smallpox. In addition to Yanktonai and the majority of the Yankton Sioux, 900 Tetons (probably Brulés) were vaccinated.⁴¹ When smallpox again struck the plains in 1837, shattering unvaccinated village tribes such as the Mandans, the Tetons went relatively unscathed; significant Teton losses were restricted to the two northernmost divisions (Sihasapa and Hunkpapa) and even there probably numbered in scores rather than hundreds.⁴² The vaccination program was extended to include the Platte-based Sioux in the 1850s. At the Upper Platte Agency seventy-five lodges (approximately 500 persons) of Oglalas and/

or Upper Brulés were vaccinated in 1853. In 1859-61 Doctor J.C.R. Clark acted as "special vaccinating agent" to the Upper Platte Agency and vaccinated 558 Oglalas, Brulés, and allied Cheyenne and Arapahos in the summer of 1859 alone.⁴³ The program helped to confirm the existing trend in Teton demography, so that, while epidemics might still be virulent and cause local temporary reverses in



Swift Bear, Brulé. (NSHS-R539:10-7)

population growth, the net population continued to grow at a record of 1.34 percent per annum during the 1840s.

That decade, however, brought the first hints of crisis to the expansionist Teton society. The burgeoning population and its intensifying participation in the buffalo robe trade depleted the game in the Teton heartland between the Black Hills and the Missouri. Two opposed responses to the crisis are discernible.

One, associated with the Two Kettles, a newly independent division budded from the Miniconjous, and with the Lower Brulés, was to intensify land use by engaging in small-scale maize horticulture and by increased sedentism around fur trading posts. Camps augmented their living on the fringe of the cash economy, with individuals cutting wood, supplying fine

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furs, and acting as messengers, guides, and herders.

The contrasting response was particularly associated with the Hunkpapas, always the northernmost Teton division. They intensified existing patterns of predatory nomadism, after 1837 extending hunting ranges northward to include the Cannonball and Heart river drainages vacated by the withdrawing village tribes. As



Pawnee Killer, Oglala. (NSHS-B774-27)

Hunkpapas expanded into the Little Missouri drainage they clashed increasingly with the Crows, who, although capable of a spirited defense, were in the grip of depopulation and gradually retreating to their core domain on the upper Yellowstone. Hunkpapas were thus able to exploit buffer zone game sanctuaries. In 1849 Teton population suffered a setback. Asiatic cholera came up the Overland Trail in the wagon trains of California-bound gold seekers. It struck Upper Brulé camps in the Platte forks region, to be followed in 1850 by smallpox. Population projections suggest that about 500 Brulés died in the epidemics. The other divisions lost fewer, but a flattening in the Teton growth rate is apparent until about 1860 (see graph 2). Teton per annum growth in 1850-70 fell to 0.5 percent.

This slowing in growth did not preclude further expansion. The Upper Brulés and Southern Oglalas continued to press down the Platte Valley against Pawnee ranges, which a people suffering 2.18 percent per annum depopulation could not defend. Although Pawnees allied themselves firmly with the U.S. as American-Sioux relations turned to war, they were unable to maintain control of their lands and in the mid-1870s relocated in modern Oklahoma.

To the northwest Teton ranges fronted with those of the Crows, who experienced depopulation of approximately 22 percent in the years 1850-71. During the 1840s at the height of the Teton growth rate Oglala leaders had failed to create a broad Teton alliance against the Crows. By the 1850s, however, continued game depletion, growing emigrant traffic on the Overland Trail bringing disease and resource loss, worsening U.S. military relations, and profound Teton ambivalence to closer U.S. treaty relations characterized by meager annuity payments for rights of way across the Sioux domain impelled increased use of the remote Powder River buffer zone. Opened by accords engineered by Crow and Miniconjou leaders, the reduction of this neutral ground followed a classic pattern. Teton bands unrepresented in the Crow truce seasonally utilized the game sanctuary, demanding access and citing Crow reluctance to agree as grounds for war. Friendly relations broke down in 1857, and despite attempts by the Upper Platte agent to broker a firm peace, during the next two raiding seasons Teton war parties terrorized the Crows into withdrawing across the Yellowstone and Big Horn rivers. The Powder River country thus became exclusive Sioux domain, to be contested vigorously with the U.S. in the next decade and a half.⁴⁴

The 1860s saw the foundations of territorial loss being laid through increasing hostilities and treaty making with the U.S. government. No significant Teton range expansion postdated 1860, although the 1870s were characterized by renewed high growth rates (1.2 percent per

annum) after a generation of sluggish growth. Favorable living conditions in the early 1870s—fluid options existing between a still viable nomadic life and the open agency system providing annuities and rations based on inflated population estimates—seem reflected in higher growth rates. In 1876-77 this interlude was thrown into chaos by war, the net result of which was to confine the Tetons by 1881 to the Great Sioux Reservation, defined by the Treaty of 1868 as comprising modern western South Dakota (after 1876 excluding the Black Hills). Immediately, as Yankton and Yanktonai populations had done after the imposition of reservation life, Teton numbers stabilized, reflecting the closure of the expansionist options open to former generations and the abrupt end of tribal self-determination as Tetons became the grudging subjects of enforced acculturation.

Although the wars with the U.S. of 1854-55, 1864-69, and 1876-77, had an immense political effect on the Tetons, their demographic impact was comparatively minor. Only in the 1855 Bluewater battle (present Garden County, Nebraska), where eighty-five Brulés were killed, were Teton casualties sustained by large numbers of noncombatants. The Tetons were fortunate to escape the worst effects of U.S. military reprisals until 1890, when a tragic series of blunders and misunderstandings erupted on the field of Wounded Knee and resulted in the deaths of possibly 260 Miniconjou and Hunkpapa Ghost Dancers, members of a pan-Indian cult intended to revive static or falling populations. Memories of this tragedy have served to torture relations between the Tetons and the U.S. for over a century.

Population Profiles of Teton Divisions, 1805-81

The following section examines in detail the experience of each of the seven Teton tribal divisions in light of their nineteenth-century population histories. It attempts to address the issues raised by Richard White in his influential 1978 article on Teton expansionism. That essay dealt

"largely with external influences on the Sioux," but expressly "not with the internal political and social changes that took place within the Confederacy during this period. This is an important study in its own right."⁴⁵

Throughout, references to population growth and loss are based upon table 3, "Reconstructed Teton Sioux Population, by Tribal Division, 1805-1881." That tabulation presents the reconstructed base line Teton population for 1805 and the terminal 1881 population established above. Six other years have also been selected to fill the intervening period and similar methods used to establish divisional totals. These reconstructed figures are based upon the contemporary estimates presented in table 2. Remarks entered in table 2 identify anomalous counts, distorted ratios of population units, and estimates omitting significant groups. All these factors were considered minutely in preparing the reconstructed divisional estimates in table 3.

1. Brulé

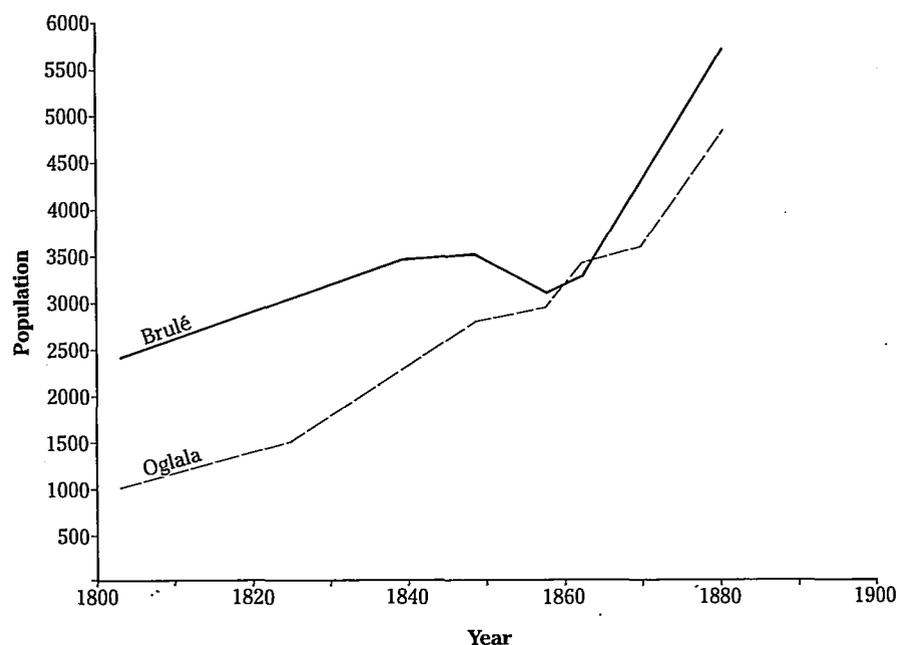
The Brulé profile (see Graphs 3 and 4 for the seven divisions) is characterized by three clear stages: (a) 1805-39, with growth at 42 percent (1.23 percent per annum), somewhat exceeding the Teton norm; (b) 1840-65, a generation of markedly slower growth centering on the catastrophic decline caused by epidemics in 1849-50 and losses in the Bluewater battle (1855); and (c) 1866-80, a closing period of growth at a phenomenal 83 percent or 6 percent per annum (Teton norm = 1 percent per annum) only exceeded at the tribal level by the Two Kettle mid-century burst.

As the southernmost Teton division, the Brulés first achieved links with the white trading community based in St. Louis after 1796. Tabeau reveals how Brulé leaders strove to isolate other Teton divisions from traders and function as middlemen, imposing terms on both parties. Clark's statistics indicate that per man Brulés traded roughly twice the amount of buffalo robes supplied by Miniconjou and the Sans Arc-Hunkpapa group, and

11 percent more than the Oglalas.⁴⁶ These facts suggest that the major reasons for Brulé excess growth 1805-25 was access to U.S. trade. Further evidence is the stabilization of population growth in 1825-39 (running at about the Teton norm of 1 percent per annum), when the expansion of U.S. trade ended Brulé dominance. During the 1840s the marked decline in Brulé growth reflects tensions related to

losses has been made, but consideration of the profiles suggests that approximately 500 Brulés died in the epidemics, about 15 percent of the population. This was by far the single most severe blow to Teton numbers during the nineteenth century. Brulé numbers grew after 1850 but were checked in 1855 when eighty-five persons were killed by U.S. troops.

After 1865 new, phenomenal growth



Graph 3. Brulé and Oglala Population, 1801-1881.

the range shift to the Platte drainage. The Minisa band split, part joining the Oglala in 1840 and part joining the Sans Arcs five years later.⁴⁷ Incipient band divisions were deepened by the move, polarizing the tribe into Upper and Lower divisions based on the Platte and Missouri drainages respectively. Traditional divisional boundaries correspond to the limits of the trade catchment areas served by Forts Laramie and Pierre.⁴⁸ Camps associated with the hereditary band chiefs of the early trade period mainly remained with the Lower Brulés, while ambitious aspirants to status drained to the Upper Platte.⁴⁹

In 1849-50 cholera and smallpox struck the plains with the Brulés worst hit among Teton divisions. No estimate of Brulé

set in. This growth was localized in the upper division and coincided exactly with the head chieftainship of Spotted Tail (1823-81), a charismatic leader who, although committed to peaceful relations with the U.S., sought to enter the new era of treaties, land cessions, and reservation life on Sioux terms and at Sioux speed. After relocation of the Upper Brulé agency away from an unpopular Missouri River site in 1871, there began a heavy drain of migration from the Northern Tetons. Large numbers of Miniconjou and Sans Arcs chose to surrender at Spotted Tail Agency in 1877, and, although many fled to Canada later that year, about 500 seemingly remained, in effect becoming Brulés. They were augmented in 1879-80

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by Sans Arc and Two Kettle relatives fleeing a martinet regime at Cheyenne River, their home agency.⁵⁰

Spotted Tail's ability to master reservation politics, maintaining a semblance of control over the implementation of government policies, was clearly a major factor in Upper Brulé growth after 1865. Yet study of Brulé band numbers yields surprising insights. Significant growth, approximately 60 percent, characterized the Southern Brulés, Spotted Tail's own bands. The Wazhazha band, however, doubled in size, and the Isanyati (Corn Band and Loafers) more than trebled. Each of these bands represented an extreme in Upper Brulé reaction to the reservation system; the Wazhazhas were highly conservative and closely associated with the Oglalas (much of the band ultimately settling at Pine Ridge), where active hostility to the U.S. remained a viable option, while the Isanyati were tractable and soon committed in varying degrees to sedentism, agriculture, and Christianity. As the architect of the middle line that typified the Upper Brulé response to the reservation system, Spotted Tail attracted large numbers of incomers to the tribe. These migrants, however, largely chose to align themselves with bands adopting polarized stances to the system.

2. Oglala

The Oglala profile is unmatched for the consistency of its phenomenal growth; at 385 percent in seventy-six years it is exceeded only by the Two Kettle profile for percentage growth. Unlike the Two Kettles, Oglala growth was sustained throughout the nineteenth century and continued into the next.

Although the Oglalas sometimes enjoyed white trading advantages (for example, being favored over the Brulés by Tabeau and Jean Valle in 1804-5, in the establishment of the Bad River trading center after 1817, and at Fort Laramie in 1834), they did not on the whole seek as strong ties with traders as did the Brulés. A number of ephemeral local factors must have contributed to the influx of outsiders into the Oglala locus of activity, but its

consistency indicates a prevailing reason. The intertribal trade in horses seems the most likely critical factor. The northern plains tribes were as much dependent on this trade for their supply of horses as they were on raiding enemy herds. In 1804 the Teton calumet ceremony, which aided intertribal trade, was modified by Oglala holy men to emphasize horse symbolism. Elsewhere I have demonstrated the impor-



Spotted Tail. (NSHS-R539:10-6)

tance of this event in the amalgamation of disparate bands into the Oglala tribe.⁵¹

The Cheyenne were principal suppliers of horses to the Tetons. Their range shift to the South Platte in 1827-34 placed them outside the Missouri trade locus.⁵² The key Oglala shift to the North Platte in 1834-35, while formally a response to the establishment of Fort Laramie and reflecting a doubling of population since 1805, may have been an attempt to control the horse trade.⁵³

Between 1805-40 both Northern Tetons and Brulés moved by whole camps to the Oglalas. Incoming Brulés cohered as the Kiyuksa band, while the northern immigrants, about half of them Miniconjou-derived, emerged as the Oyuhpe band, maintaining strong northern links (prob-

ably articulated through the horse trade). By 1839 the tribe was divided equally into three primary bands, the Oglala proper, the Kiyuksa, and Oyuhpe, of 100 lodges each.⁵⁴ After Kiyuksa incorporation of part of the Brulé Minisa band in 1840, however, significant in-migration temporarily ended, and internal shifts drained population to the Oglala proper until 1870. This check reflects the Brulé population reverse of 1849-50, while in the north, although Teton growth continued, it sought other outlets for out-migration. After 1855 substantial in-migration resumed, although heavily localized in the emergent Bad Face-Loafer bands.

Before 1834 the Oglala geographically constituted a link in a north-south distribution of Teton divisions, but by 1849 the Oglala range had cohered as an arc defining the southwest segment of the Teton domain. After 1850 as the domain expanded southeastward to the Republican River and northwestward to the lower Yellowstone, the Oglalas expanded in both directions. In this way the Oglalas acted as a frontier society, their range a catchment zone for the ambitious and aspirant. By 1870 Oglala bands occupied a corridor defining the western boundary of the Teton domain. Warfare had now superseded the old horse trade as the key factor in Oglala success. Northern Oglala bands had played a significant role in the Crow dispossession war, 1857-62, and after 1865 took the lead in articulating Teton resistance to U.S. encroachments on their newly won domain. The economic dimension to both these operations was significant, because Crow horse herds *pro rata* were twice the size of Teton herds, and the wealth acquired in stolen stock along the Bozeman Trail was phenomenal indeed.

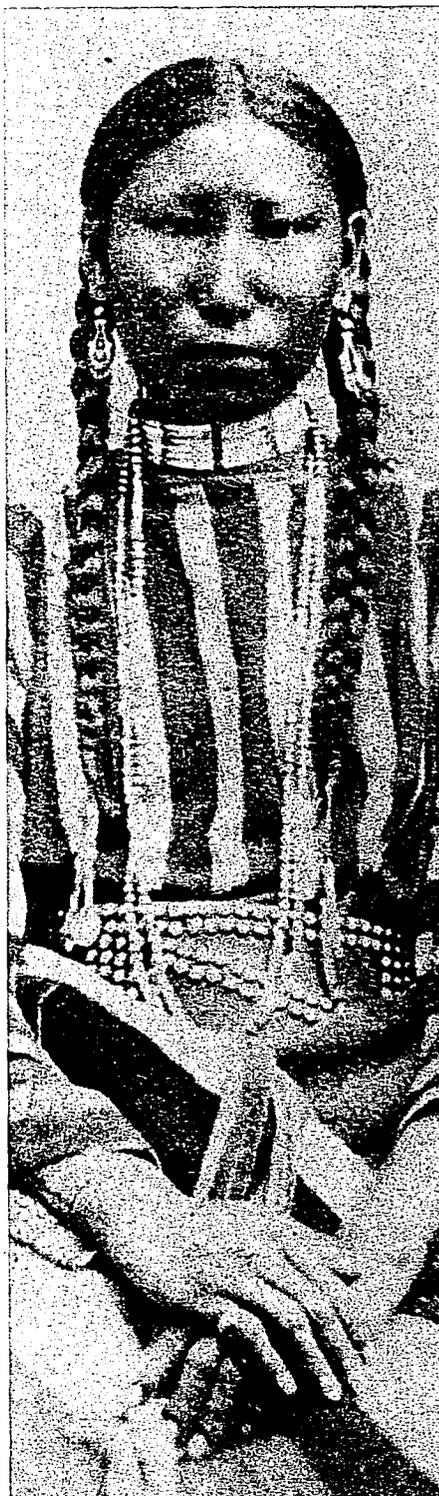
Agency statistics from the 1870s confirm that the Oglalas continued to command access to abundant sources of horses. John Ewers's tabulation of comparative tribal wealth in horses for the year 1874 demonstrates that the Oglala agency enjoyed the highest horse to person ratio of all the Sioux agencies. (Because the human population statistics are

massively inflated, as discussed above, detailed analysis is problematic). Herd size was greatest among the unsundered Oglalas; upon capitulation in 1877 the Crazy Horse band of 899 persons owned over 2,200 horses. The ratio of more than 2.4 horses per person significantly exceeded the contemporary Crow ratio (1.9:1), demonstrating the ongoing loss of military "edge" by the Crows.⁵⁵

After the Treaty of 1868 the Oglalas continued to attract northern immigrants dissatisfied with their new agencies, although this flow was less significant than the contemporary movement to the Upper Brulés. The conservative Brulé Wazhazha band chose to settle at the Oglala agency. Although half the band was forced to relocate to Spotted Tail Agency in 1877, Wazhazha-Oglala links continued to plague reservation administrators into the 1890s.

3. Miniconjou

In contrast to the aggregative development of the Brulés and Oglalas, the Miniconjou profile is marked by steady population loss, amounting to an absolute decline of 36 percent in 1805-81. The nineteenth century saw a steady drain by out-marriage and the regular migration of camps to other Teton divisions. There are four major stages in this sequence of movement: (a) 1800-20, to the Brulés, where the Red Lodge and Orphan immigrants cohered as important camps seeking European-U.S. trade links; (b) 1820-40, to the Oglalas, for access to the intertribal horse trade, immigrants emerging as the Oyuhpe band; (c) 1840-65, to the nascent Two Kettle tribal division, for stronger U.S. trade relations and in response to game depletion discussed below; and (d) 1865-81, to the Oglalas and more especially to the Upper Brulés, as the reservation system was implemented and many Northern Tetons sought more congenial homes at agencies more remote from U.S. control. Up to 700 Miniconjous, from consideration of the profiles, moved southward in 1865-81. Like earlier generations they sought better living conditions among the Southern Tetons—now due to hand-



Dove Eye, Spotted Tail's daughter. (NSHS-B774-22)

somely inflated population estimates at the Oglala and Upper Brulé agencies, which created increased per capita government rationing, 1871-86.⁵⁶

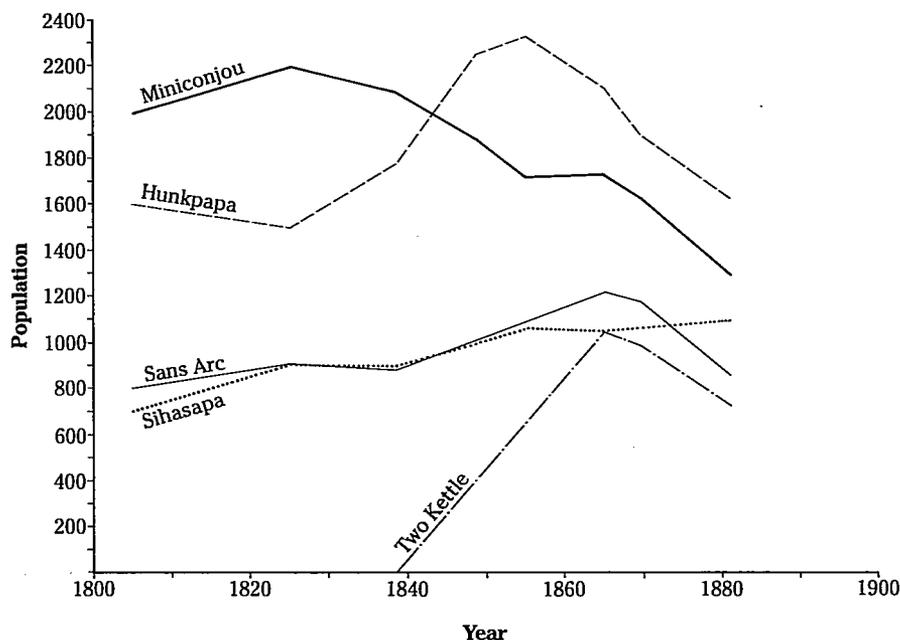
Taken in conjunction with consistent population loss, it is significant that Teton hereditary chieftainships were most highly developed among the Miniconjou. Steady shedding of population helped to preserve such a system because disaffected aspirants to status, a growing class under nineteenth-century demographic conditions, sought power bases outside the tribe. A comparable trend may be detected among the Lower Brulé and Sans Arc divisions.

4. Two Kettle

No contemporary document identifies the Two Kettle tribal division before Stephen R. Riggs's 1840 journal. Comparison with Joseph N. Nicollet's tabulation from 1839 confirms that prior to 1840 the Two Kettles were a constituent camp of the Broken Arrow, a Miniconjou primary band, with a population that may be reconstructed at approximately 220 persons. Leadership was vested in the Four Bears family, who had close trading links with both American Fur Company and "opposition" personnel. Rejecting the intractable reputation of their parent band, the Two Kettle sought after 1840 to create a very different community.⁵⁷

The Two Kettle emergence is to be understood in the context of mid-century ecological conditions in the Teton heartland. Population growth and increased participation in the buffalo robe trade depleted game in the middle Missouri Valley.⁵⁸ Teton communities had to devise solutions to the crisis in resources. The Two Kettle response was expressed in a new drive to relative sedentism. They created semipermanent villages near Fort George (1845) and Fort Pierre (by 1855) and its successor posts. Denig characterized the Two Kettle as thrifty, able hunters and trappers, exploiting fine fur resources previously untapped by Teton suppliers and participating only marginally in the expansionist war complex classically identified with the Tetons. The Two Kettles also

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Graph 4. Miniconjou, Two Kettle, Sans Arc, Sihasapa, and Hunkpapa Population, 1801-1881.

intensified resource use by adopting limited horticulture.⁵⁹

Contemporary Tetons largely approved of this radical adaptation because Two Kettle numbers grew fivefold in the generation 1840-65. Not even the Oglalas could match this phenomenal local growth rate. The profiles indicate strong in-migration from the parent Miniconjou throughout the generation. Whole camps moved in this way, since Black Rock, Miniconjou tribal war leader in 1832, was rated a Two Kettle headman by mid-century.⁶⁰ In 1855-65 significant influx is indicated from the Hunkpapa and Sihasapa.

After 1865 this startling growth immediately stopped, with population stabilizing for over a decade and out-marriage to the Brulés and Lower Yanktonai being likely. Population reversal undoubtedly arose from the crisis in U.S. relations and subsequent dissatisfaction with conditions at newly established Cheyenne River Agency as the reservation era opened. "Hostile" Teton bands first sought to terminate "friendly" attempts at farming; after the army took over the agencies in 1876,

crass militarism succeeded in undermining the Cheyenne River Agency farming program among the very people who might have led it. Consequently in 1879 a sizeable Two Kettle and friendly Sans Arc camp deserted Cheyenne River to relocate at the Upper Brulés' Rosebud Agency.

5. Sans Arc

The Sans Arc profile for 1805-65 indicates 52 percent growth, somewhat below the Teton norm of 63 percent. Hereditary chieftainship, associated particularly with the Red-Tailed Eagle, Elk Head, and Crow Feather families, existed in both Sans Arc primary bands. Analogous to the Miniconjou and Lower Brulé cases, perpetuation of these statuses and modest growth should be directly related phenomena. Excess population seeking status moved elsewhere, with the profiles indicating significant movement to the Oglala Oyuhpe band during the 1830s and to the Hunkpapa and Two Kettle divisions after 1840. In 1845 part of the Brulé Minisa band joined the Sans Arc tribe, evidently at the invitation of Elk Head, Keeper of the Sacred Calf Pipe, although this

aggregative policy was not sustained.

After 1865, in line with the Northern Tetons generally, Sans Arc population began to fall sharply, draining to the Oglalas and especially to the Upper Brulés. In 1877 most resisting Sans Arcs chose to surrender at Spotted Tail Agency. Although many fled to Canada that fall, probably in excess of 250 stayed permanently with the Brulés. Their numbers were swelled by desertions from Cheyenne River Agency in 1878-79 led by Burnt Face, and the phenomenon continued after the 1881 surrenders from Canada. By the 1880s the Sans Arcs remaining as a tribe at Cheyenne River had declined to near their 1805 population.⁶¹

6. Sihasapa

The Sihasapa, or Blackfoot Sioux, were the last Teton division to cross west of the Missouri River permanently. They maintained strong British trading contact in Minnesota in the period 1805-25, which may account for modest growth in excess of the Teton norm. By 1825 such links were declining in importance as the U.S. trading community consolidated its position on the Missouri. The Sihasapa sought stronger ties with the Hunkpapa Tetons at this time, shifting their range across the Missouri during the 1830s, but the modest rate of Sihasapa growth (even allowing for disproportionately high losses during the 1837 smallpox epidemic) reflects their evident secondary status. This trend is consistent with the emergence of hereditary chieftainships, as in the case of the Fire Heart and Grass families.

After 1865 Sihasapa population remained stable, contrasting with the marked losses in southward drain undergone by their Hunkpapa, Sans Arc, Two Kettle, and Miniconjou relatives. Chronologically this stability coincides with a perceptible distancing in Sihasapa relations from the Hunkpapa as the reservation period opened; the emergence of a major "friendly" leader in John Grass, and an actual administrative division of the tribe as certain groups enrolled at Grand River (subsequently Standing Rock) and others at Cheyenne River agencies. These factors

resulted in a majority of Sisasapa rejecting armed resistance as a solution to the crisis in U.S. relations, a reversal of the Hunkpapa pattern with an apparent demographic bonus.⁶²

7. Hunkpapa

The first two decades of the American era saw a roughly static Hunkpapa population. This phenomenon indicates out-migration to the Southern Tetons, where the Oglalas included camps with names (Wakan and Sore-backs) derived from Hunkpapa parent groups.⁶³ Hunkpapa population stabilized after 1825 and increased at near the Teton norm until about 1840. Then during the 1840s Hunkpapa numbers rose by 2.6 percent per annum, twice the Teton norm. This sudden burst was contemporaneous with the Two Kettle surge and similarly reflected game depletion in the Teton heartland. In contrast to the Two Kettle response of sedentism and intensified resource use, the Hunkpapas chose to intensify the Teton tradition of militant expansionism, neglecting U.S. trade links. The northernmost Teton division, the Hunkpapas extended the Teton domain up the Missouri Valley as smallpox-devastated Mandan and Hidatsa villagers withdrew. Hunkpapa participation in joint use accords between the Miniconjous and the Arikara villagers opened the upper Little Missouri drainage after 1847, increasing Hunkpapa clashes with the Crows.⁶⁴

The 1840s were marked by incorporation of immigrants, principally Sisasapa and Sans Arc, attracted by a Hunkpapa policy of "predatory nomadism" that solved the heartland resource crisis by extending hunting ranges into game-rich war zones. This trend was reversed after 1850. In 1850-55 growth slowed to the Teton norm, indicating the end of significant in-migration. After 1855 the Hunkpapas began to decline absolutely, well ahead of the general northern drain that set in a decade later. In the generation 1855-80 Hunkpapa population loss ran at over 1.2 percent per annum, in contrast to 1.0 percent per annum growth as a

Teton norm. Discounting some known minor outbreaks of disease (Nine Hunkpapa lodges, approximately sixty persons, died of smallpox in 1856-57),⁶⁵ large numbers chose to leave the Hunkpapa during the critical period of U.S. relations.

As the northernmost Teton group, the Hunkpapas had developed the weakest relations with St. Louis traders in the early nineteenth century. Throughout the period 1851-81 a majority of Hunkpapa was identified with a clearly formulated anti-American policy increasingly associated with Sitting Bull (1832-90). This policy rejected treaty annuities, construed as legitimizing U.S. land use, and tolerated only the presence of traders in the Teton domain. Analysis of statistics shows that the "friendly" Hunkpapa faction lost numbers at a faster rate than the "hostile" majority; the former numbered ninety lodges in 1867 (from a profiled total of 325) but only 333 persons or fifty-five lodges in 1876 (from approximately 290 total Hunkpapa lodges).⁶⁶ The depopulation indicates the Sitting Bull stance was relatively unpopular, perceived as unrealistic in the long term, and its methods of group control by camp police deeply resented by the ideologically nonaligned. The rhetoric of betrayal aimed at Southern Teton agency leaders by militant Hunkpapas (and their latter-day apologists) reflects the direction of the drain of disaffected Hunkpapas during the 1870s.⁶⁷

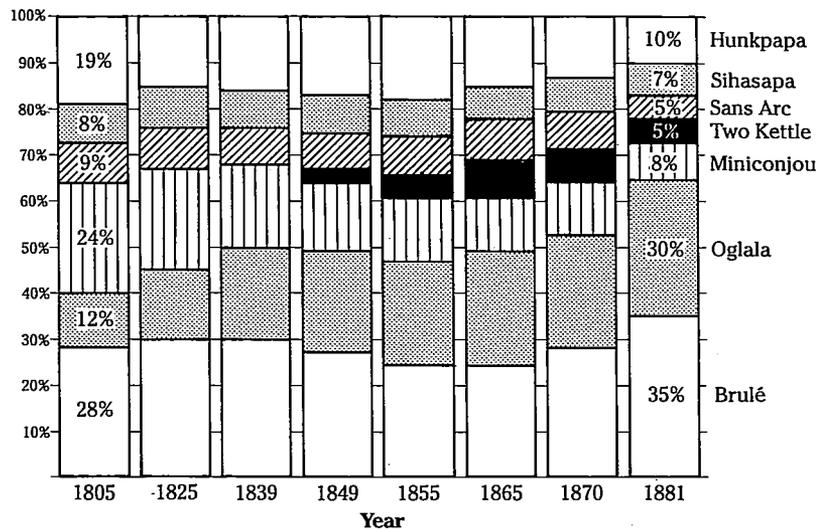
Conclusion

The arrival of Europeans and the introduction of Old World diseases ushered in a period of massive population collapse in native North America. Certain peoples of the plains region, especially the horticultural village tribes, were reduced by rates of up to 95 percent before populations re-established equilibrium by the early twentieth century. Among the less densely settled, nomadic tribes, wider variations in depopulation rates are evident. Certain tribes originating on the northeast margin of the plains, specifically the Cree and the Sioux, made relatively early contact with Europeans, suffered comparatively modest losses, acquired critical immunities,



Running Antelope, Hunkpapa. (NSHS-R539:10-9)

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Graph 5. Tribal Divisions as Percentages of Reconstructed Teton Population, 1805-1881.

and devised dispersal strategies that established population equilibrium late in the eighteenth century. They were able to turn the plains depopulation crisis to their own advantage in intertribal affairs.

During the Sioux depopulation period, 1655-1785, many Sioux bands filtered out of the Minnesota woodlands to augment plains-adapted relatives on the tall-grass prairie. Commitment to communal buffalo hunting required increased population dispersal, and the Teton Sioux divisions gradually appropriated ranges vacated by horticultural neighbors suffering worse depopulation. Striking decline in population density, contrasted with increasingly concentrated village settlements combining for defense, was probably a significant factor in comparative Sioux success in combating disease and terminating the depopulation cycle.

Sioux population grew after 1785, and Teton territorial expansion continued. Withdrawal of collapsed village populations permitted Tetons to extend ranges west of the Missouri, where they continued expansion toward new population vacuums. One of the most important of these was on the southern high plains, where sustained depopulation throughout the nineteenth century caused the Comanches to make a series of joint land-

use alliances with, progressively, the Kiowa, Arapaho, and Cheyenne. The southern Teton divisions steadily tracked this vacuum as allies of the two latter tribes. To the southeast, Tetons rolled back Pawnee hunting ranges by purely military means, while on the northwestern Crow frontier they employed a joint diplomatic-military strategy to open up the game rich buffer zones.

A number of generalized conclusions may be drawn from the reconstructed trends of Teton population dynamics in the period 1785-1881. The seven classic Teton "tribes" were late sociopolitical phenomena whose roots can be traced in the depopulation period. Population loss encouraged fusion of existing bands, a process intensified by the increasing importance of the large scale communal buffalo hunt, which favored regular seasonal cooperation of multiband units. Acquisition of growing horse herds after about 1765 further intensified the aggregative process through increased mobility and hunting efficiency, permitting larger groups to remain together for extended summer periods. As net population grew again after 1785, several Teton tribal polities may be discerned emerging, each consisting of several bands integrated by preferential marriage arrange-

ments, calumet trade relations, broadly defined military strategies, and by innovative or newly elaborated institutions, such as the Sun Dance complex, warrior societies, and tribal councils, which remained either nonexistent or poorly developed among the Eastern Sioux.

Aggregative Teton tribalism entailed the emergence of a network of overlapping summer ceremonial loci that multiplied under conditions of population growth. Four such tribal loci are evident in the period 1785-1825, rising to seven or more by 1860. Comparative population levels imply that approximately 2,000 persons constituted an ideal tribal size. This size compares well with nomadic tribal structures throughout the plains. Numbering well above 2,000 are tribes who developed dual ceremonial loci during the nineteenth century (Cheyenne and Arapaho) or who already held multiple Sun Dances (the Blackfeet "Confederacy"); well below 2,000 are ethnic units that combined to form a single ceremonial locus (Kiowa and Kiowa-Apache).⁶⁸

Tribal polities were competitive, jockeying for preferential access to hunting grounds and both intertribal and inter-ethnic trade. Population drains occurred as people shifted allegiance to favored loci. Such drains are perceptible in demographic reconstruction and can represent steady out-marriage or, in more dramatic cases, migration by organized camps as the aspirant and ambitious sought status in areas of enhanced opportunity.

A significant contrast is clear between stable and aggregative tribes. Stable groups, typified by the Miniconjou, were characterized by population growth somewhat below the Teton norm, with the implication, supported by historical evidence, that such groups shed "excess" population to other Teton divisions. Stable tribes were also marked by well-defined hereditary band chieftainships, implying the realization of idealized high status, postmarital, virilocal residence (where the wife joins her husband's camp). Such a system acted to perpetuate stable bodies of male kindred over time, minimizing factionalism.

Aggregative tribes, such as the Oglala, were characterized by population growth well above the Teton norm, indicating their position as net recipients of excess growth from stable tribes. Hereditary band chieftainships, although present, were comparatively weak, as might be expected in societies attracting outside aspirants to status. Postmarital residence patterns were probably more flexible. Miniconjou head chief One Horn remarked of the Oglala Kiyuksa band in 1865, "It is a band that is mixed altogether, composed of men of different bands."⁶⁹ The statement clearly reflected more flexible patterns of postmarital residence in one of the classic aggregative "super bands." Such a pattern is consistent with the need of aspirant chiefs to create strong new kinship networks through the in-marriage of prominent warriors to their camps.

One Horn, as the principal leader of the classic stable Teton division, clearly expressed some distaste for what he perceived as socially chaotic conditions among aggregative groups. Indeed, the integrative mechanisms identified above were stretched to their limits in aggregative bands and tribes. Although precise political contexts varied, the four cases of assassination of Sioux head chiefs in the nineteenth century took place in tribes that had undergone population growth of an aggregative nature. Aggregative groups were inherently unstable, their politics dangerously volatile. The ambitious continued to seek those enhanced opportunities in the hunt, war, and trade that identified aggregative loci, while aggregative host groups continued to encourage incremental growth in a calculated play-off between increased military capacity and the critical intensification of factionalism.

For most aggregative groups periods of relatively massive in-migration did not exceed a generation or so before resource limits and integrative mechanisms were exceeded. Population levels might stabilize or suffer marked decline as excess population sought new outlets and new super-bands emerged. In extreme cases of sustained growth "dual tribes" emerged,

for example, Upper/Lower Brulé, Northern/Southern Oglala, and Upper/Lower Yanktonai, as separate ceremonial loci were gradually established to minimize factionalism. Nevertheless, Oglala growth continued at aggregative rates into the early twentieth century, indicating that poor integration of in-migrants is a significant factor in the endemic factionalism that has characterized historic and modern Oglala politics.

A number of regularities may be identified in the direction of Teton population drain. Net population movement was to the periphery of the Teton domain, evident in both major cases of ephemeral growth, those for the Hunkpapa and Two Kettle in the period 1840-65. In-migrants joined Hunkpapas in pushing northward the limits of the Teton domain into ranges vacated by withdrawing village groups and into buffer zones weakly contested by declining Crow and Assiniboin populations. The Two Kettle case is unusual because it represents an eastward shift back into game-depleted ranges vacated by other Teton. A new periphery was thus created, stimulating new strategies of relative sedentism and resource intensification by the emergent Two Kettles.

Population drain was most consistent to the southern periphery. The southernmost divisions, Brulé and Oglala, constituted 40 percent of the Teton total in 1805, rising to 65 percent by 1881. The major movements southward may be divided into three periods: (a) 1805-40, as northern Teton sought better positions in the buffalo robe trade and the intertribal horse trade; (b) 1865-70, when a brief, highly localized population drain benefitted certain Northern Oglala bands and the Brulé Wazhazha band engaged in the highly profitable Bozeman Trail war; and (c) 1865-81, a more sustained drain created by perceived advantages at the Upper Brulé and Oglala agencies as the reservation system was imposed upon Indian populations. This latter movement continued well into the reservation period.

The broad trends of Teton population history unequivocally demonstrate the vigor, resourcefulness, and adaptive flex-

ibility of the Sioux people during the critical period of Euroamerican contact. Even during their depopulation cycle, the Sioux were able to perfect strategies of population dispersal to minimize the worst effects of introduced diseases and to win them expanded hunting ranges. Although predatory nomadism was a fact of life on the plains, this should not blind us to other central facets of the Teton experience that have gone unremarked. Teton diplomacy, couched in the plains idiom of calumet-trade relations with neighbors red and white, was intelligent and astute in its creation of joint land-use alliances and trading networks. Crises in resource availability elicited a wide variety of intelligent responses. The game depletion in the Teton heartland after 1840 is particularly significant, for several Teton groups sought to intensify resource use through incipient horticulture and increased participation on the fringe of the cash economy. The Sioux people are about to enter the twenty-first century. Expansionist options of predatory nomadism will not be open to them again, but the Sioux and the larger society must together learn to tap again the adaptive potential of this dynamic and resilient people.

Notes

¹ George E. Hyde, *Red Cloud's Folk: A History of the Oglala Sioux Indians*, 2d ed. (Norman: University of Oklahoma Press, 1957); Doane Robinson, "A History of the Dakota or Sioux Indians," *South Dakota Historical Collections (SDHC)* 2 (1904); Richard White, "The Winning of the West: The Expansion of the Western Sioux in the Eighteenth and Nineteenth Centuries," *The Journal of American History* 65 (1978): 319-43.

² Arthur J. Ray, *Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of Hudson Bay, 1660-1870* (Toronto: University of Toronto Press, 1974), 112, fig. 37.

³ John S. Gray, *Centennial Campaign: The Sioux War of 1876* (Fort Collins: Old Army Press, 1976), 312-13.

⁴ Annie Heloise Abel, ed., *Tabeau's Narrative of Loisel's Expedition to the Upper Missouri* (Norman: University of Oklahoma Press, 1939), 105 n; Mildred Mott Wedel, "Le Sueur and the Dakota Sioux," in Elden Johnson, ed., *Aspects of Upper Great Lakes Anthropology: Papers in Honor of Lloyd A. Willford* (St. Paul: Minnesota Historical Society, 1974), 157-71, esp. 165; Gary E. Moulton, ed., *The Journals of*

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the Lewis and Clark Expedition: August 25, 1804-April 6, 1805 (Lincoln: University of Nebraska Press, 1987), 3:22.

⁵ Col. John E. Smith, Fort Laramie, to Maj. George D. Ruggles, acting adjutant general, Department of the Platte, Mar. 22, 1871, Records of the Adjutant General's Office, RG 94, National Archives, Washington, D.C.; Thaddeus A. Culbertson, "Journal of an Expedition to the Mauvaises Terres and the Upper Missouri in 1850," John Francis McDermott, ed., *Smithsonian Institution Bureau of American Ethnology (SIBAE) Bulletin* 147 (1952): 135-36; Alfred W. Vaughan, Upper Missouri Agency, to Alfred Cumming, superintendent of Indian affairs, St. Louis, Sept. 20, 1853, *Annual Report of the Commissioner of Indian Affairs* (1853), 112-19; Gouverneur K. Warren, *Preliminary Report of Explorations in Nebraska and Dakota, in the Years 1855-'56-'57* (Washington: GPO, 1875), 48; Edwin Thompson Denig, *Five Indian Tribes of the Upper Missouri: Sioux, Arickaras, Assiniboinnes, Crees, Crows*, John C. Ewers, ed. (Norman: University of Oklahoma Press, 1961); Thomas S. Twiss, Upper Platte Agency, to Alfred W. Cumming, Nov. 14, 1855, Letters Received, Bureau of Indian Affairs, RG 75, National Archives; Twiss to commissioner of Indian affairs, Sept. 22, 1856, *Annual Report of the Commissioner of Indian Affairs* (1856), 94-99.

⁶ Henry F. Dobyns, "Estimating Aboriginal American Population: An Appraisal of Techniques with a New Hemispheric Estimate," *Current Anthropology* 7 (1966): 395-416, 425-45. For a review of reactions to Dobyns and a sound analysis of local population dynamics in Ontario-upstate New York, see Bruce G. Trigger, *Natives and Neocomers: Canada's "Heroic Age" Reconsidered* (Kingston, Ont.: McGill-Queen's University Press, 1985), chap. 5; Henry F. Dobyns, *Their Number Become Thinned: Native American Population Dynamics in Eastern North America* (Knoxville: University of Tennessee Press, 1983).

⁷ "Trudeau's Journal," *SDHC* 7 (1914): 403-74, esp. 459 for contact Arikara population. This and subsequent early twentieth-century estimates are derived from Frederick Webb Hodge, ed., "Handbook of American Indians North of Mexico," *SIBAE Bulletin* 30 (1912), and W. Raymond Wood and Margot Liberty, eds., *Anthropology on the Great Plains* (Lincoln: University of Nebraska Press, 1980), 284-96.

⁸ George E. Hyde, *The Pawnee Indians*, 2d. ed. (Norman: University of Oklahoma Press, 1974), 364-65; Richard White, *The Roots of Dependency: Subsistence, Environment, and Social Change among the Choctaws, Pawnees, and Navajos* (Lincoln: University of Nebraska Press, 1983), 154.

⁹ The Mandan-Hidatsa contact estimate represents an average between the estimates of Donald J. Lehmer and Alfred W. Bowers. See Roy W. Meyer, *The Village Indians of the Upper Missouri: The Mandans, Hidatsas, and Arikaras* (Lincoln: University of Nebraska Press, 1977), 14; Alfred W. Bowers, "Hidatsa Social and Ceremonial Organization," *SIBAE Bulletin* 194 (1965): 486; Pierre Margry, ed., *Decouvertes et établissements des français dans*

l'ouest et dans le sud de l'Amerique septentrionale 4 (Paris: Jouast et Sigaux, 1888), 601-2.

¹⁰ Elliott Coues, ed., *The Expeditions of Zebulon Montgomery Pike* (New York: Francis P. Harper, 1895), 2:600-601.

¹¹ The principal source for 1805 figures is Meriwether Lewis and William Clark, "A Statistical View of the Indian Nations Inhabiting the Territory of Louisiana, and the Countries Adjacent to Its Northern and Western Boundaries," *American State Papers: Indian Affairs* 1: 705-43 (with some adjustments in view of Lewis's selective underestimating as discussed below). Cf. Elliott Coues, *New Light on the Early History of the Greater Northwest: The Manuscript Journals of Alexander Henry and David Thompson* (New York: Francis P. Harper, 1897), 2:522-23, 530.

¹² Clark Wissler, "Population Changes among the Northern Plains Indians," *Yale University Publications in Anthropology* 1 (1936); Ray, *Indians in the Fur Trade*, chap. 5.

¹³ Richard Glover, ed., *David Thompson's Narrative, 1784-1812* (Toronto: The Champlain Society, 1962), 236.

¹⁴ Ferdinand V. Hayden, "Contributions to the Ethnography and Philology of the Indian Tribes of the Missouri Valley," *Transactions of the American Philosophical Society* 12, pt. 2 (1862): 253, s.v. Cree; Alexander Mackenzie, *Voyages from Montreal... Through the Continent of North America... in the Years 1789 and 1793* (London: Cadell and Davis, 1801), lxix ff; Denig, *Five Indian Tribes*, 109.

¹⁵ R. Cole Harris, ed., *Historical Atlas of Canada, Vol. 1: From the Beginning to 1800* (Toronto: University of Toronto Press, 1987), plates 18 and 69 by Conrad E. Heidenreich.

¹⁶ Gary Clayton Anderson, *Kinsmen of Another Kind: Dakota-White Relations in the Upper Mississippi Valley, 1650-1862* (Lincoln: University of Nebraska Press, 1984), chap. 2, esp. 17-18.

¹⁷ Wedel, "Le Sueur and the Dakota Sioux," 157-71.

¹⁸ Cf. Anderson, *Kinsmen of Another Kind*, 21-22.

¹⁹ Helen Hornbeck Tanner, ed., *Atlas of Great Lakes Indian History* (Norman: University of Oklahoma Press, 1987), 65-66; Norman Gelb, ed., *Jonathan Carver's Travels Through America, 1766-1768: An Eighteenth-century Explorer's Account of Uncharted America* (New York: Wiley, 1993), 87.

²⁰ Memorial of Indian traders, in "Papers from the Canadian Archives, 1767-1814," *Collections of the State Historical Society of Wisconsin* 12 (1892): 76-82, quotation on 81.

²¹ Lewis and Clark, "Statistical View of the Indian Tribes," cf. William Clark, "Estimate of the Eastern Indians," in Moulton, ed., *Journals of Lewis and Clark* 3: 386-450, esp. 408-20.

²² Abel, *Tabeau's Narrative*, 101-2. Pike's tabulation asserts 21,675 total Sioux population, but a recheck of his figures shows he failed to add 900 "Yanktons"

warriors and 90 "People of the Leaves Detached" (Wahpekute) warriors to his grand total, which stands corrected at 22,665.

²³ Hyde, *Red Cloud's Folk*, 29-30.

²⁴ Moulton, ed., *Journals of Lewis and Clark* 3: 27-28, 32-33.

²⁵ *Ibid.*, 388.

²⁶ Abel, *Tabeau's Narrative*, 115 n.

²⁷ Moulton, *Journals of Lewis and Clark* 3:104, 106, 132 fn.8.

²⁸ Abel, *Tabeau's Narrative*, 103.

²⁹ Gary E. Moulton, ed., *Atlas of the Lewis and Clark Expedition* (Lincoln: University of Nebraska Press, 1983), map 126; *American State Papers: Indian Affairs* 2: 76-77.

³⁰ Cf. Abel, *Tabeau's Narrative*, 121-23.

³¹ William H. Keating, *Narrative of an Expedition to the Source of St. Peter's River* (1825; reprint Minneapolis: Ross and Haines, 1959), 404; Stephen Return Riggs, "Dakota Grammar, Texts, and Ethnography," James Owen Dorsey, ed., *Contributions to North American Ethnology* 9 (1893): 161, 186. Both these observations derive from members of the Renville trading family.

³² Gray, *Centennial Campaign*, chap. 26.

³³ James C. Olson, *Red Cloud and the Sioux Problem* (Lincoln: University of Nebraska Press, 1965), 306.

³⁴ Results from the annual reports of the commissioner of Indian affairs were tabulated in Wissler, "Population Changes."

³⁵ On Santee abandonment of the infirm, see Ruth Landes, *The Mystic Lake Sioux: Sociology of the Mdeuakantonwan Santee* (Madison: University of Wisconsin Press, 1968), 32; contrast the Teton ideals in Royal B. Hassrick, *The Sioux: Life and Customs of a Warrior Society* (Norman: University of Oklahoma Press, 1964), 113.

³⁶ Archeological work in Minnesota indicates the increasing utilization of wild rice after A.D. 800, a time consistent with the emergence of the Dakota (Sioux) language as a linguistic entity distinct from its nearest relatives in the Siouan language group.

³⁷ Wedel, "Le Sueur and the Dakota Sioux"; Anderson, *Kinsmen of Another Kind*, 24-25.

³⁸ Edward D. Neill, ed., "Memoir of the Sioux, A Manuscript in the French Archives" *Macalester College Contributions* 10 (St. Paul: Pioneer Press, 1890): 223-40, esp. 236.

³⁹ "Journal of Trudeau on the Missouri River, 1794-1795," in A. P. Nasafir, ed., *Before Lewis and Clark: Documents Illustrating the History of the Missouri, 1785-1804* (St. Louis: St. Louis Historical Documents, 1952), 1:294-311, quotation on 310; Abel, *Tabeau's Narrative*, 104; Edmund C. Bray and Martha Coleman Bray, trans. & eds., *Joseph N. Nicollet on the Plains and Prairies: The Expeditions of*

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1838-39 With Journals, Letters, and Notes on the Dakota Indians (St. Paul: Minnesota Historical Society Press, 1976), 261.

⁴⁰ Nasatir, *Before Lewis and Clark*, 1:273, 277, 294-311; 2: 527.

⁴¹ Michael K. Trimble, "The 1832 Inoculation Program on the Missouri River," in John W. Verano and Douglas H. Ubelaker, eds., *Disease and Demography in the Americas* (Washington: Smithsonian Institution Press, 1992), 257-64.

⁴² See Bray and Bray, *Joseph N. Nicollet*, 260; Denig, *Five Indian Tribes*, 27-28. Four hundred Yanktonais are said to have died in the 1837 epidemic. Russell Thornton, *American Indian Holocaust and Survival: A Population History since 1492* (Norman: University of Oklahoma Press, 1987), 95.

⁴³ Dr. J.C.R. Clark, Upper Platte Agency, to commissioner of Indian affairs, Oct. 25, 1859, and "Statement of Indians Vaccinated," Oct. 28, 1859, Letters Received, RG 75, National Archives.

⁴⁴ Kingsley M. Bray, "Lone Horn's Peace: A New View of Sioux-Crow Relations, 1851-1858," *Nebraska History* 66 (1985): 28-47.

⁴⁵ White, "Winning of the West," 329 n.

⁴⁶ Lewis and Clark, "Statistical View of the Indian Tribes," 713.

⁴⁷ The Minisa were rated Brulé in 1839, but by November 1841 their chief Le Borgne was rated an Oglala. Bray and Bray, *Joseph N. Nicollet*, 261; David Adams diary, entry for Nov. 27, 1841, transcript at the Museum of the Fur Trade, Chadron, Nebr., of the original held at the Missouri Historical Society, St. Louis. Reconstruction of Minisa-Sans Arc relations is based upon the Wind winter count. James H. Howard, "Two Dakota Winter Count Texts," *Plains Anthropologist* 5 (1955): 13-30; A. R. Bouis letter, Aug. 31, 1845, in "Fort Tecumseh and Fort Pierre Journal and Letter Books," *SDHC* 9 (1918): 206f.; Culbertson, "Journal of an Expedition," 135-36; Hodge, ed., "Handbook of American Indians," 1: 625. Cf. Sans Arc, below.

⁴⁸ Ernest L. Schusky, *The Forgotten Sioux: An Ethnohistory of the Lower Brule Reservation* (Chicago: Nelson-Hall, 1975), 112-14; Charles E. Hanson, Jr., and Veronica Sue Walters, "The Early Fur Trade in Northwestern Nebraska," *Nebraska History* 57 (1976): 304-5. Fort Pierre outfitted branch posts on the White River as high as modern White Clay Creek, the western boundary of the Lower Brulé. Fort Laramie supplied operations along the Nebraska stretch of the White River.

⁴⁹ Lower Brulé chiefs in council with U.S. treaty commissioners in October 1865 stressed their hereditary succession from chiefs of the early fur trade period. *Proceedings of a Board of Commissioners to Negotiate a Treaty or Treaties with the Hostile Indians of the Upper Missouri* [1865] (Washington, n.d.), 37-47; also found in "Documents Relating to the Negotiation of Ratified and Unratified Treaties with Various Indian Tribes, 1801-1869," *Microfilm Publication T494*, RG 75, National Archives. For back-

ground on this commission, see also "Report of Commission to Treat with Sioux of the Upper Missouri," *Annual Report of the Commissioner of Indian Affairs* (1865), 537-42.

⁵⁰ George E. Hyde, *Spotted Tail's Folk: A History of the Brulé Sioux* (Norman: University of Oklahoma Press, 1961), 304-5; George E. Hyde, *A Sioux Chronicle* (Norman: University of Oklahoma Press, 1956), 42-45; Harry H. Anderson, "A History of the Cheyenne River Indian Agency and Its Military Post, Fort Bennett, 1868-1891," *SDHC* 28 (1956): 481-82.

⁵¹ Kingsley M. Bray, "The Political History of the Oglala Sioux: Part I—Making the Oglala Hoop, 1804-1825," *English Westerners' Society American Indian Studies Series* (London, 1982), 9 ff. Cf. James R. Walker, *Lakota Belief and Ritual*, Raymond J. DeMallie and Elaine A. Jahner, eds. (Lincoln: University of Nebraska Press, 1980), 193 ff.

⁵² Donald J. Berthrong, *The Southern Cheyennes* (Norman: University of Oklahoma Press, 1963), 25-26, cites documents which demonstrate the Cheyennes' key role in supplying the fur companies with horses before their removal southward, complete by 1833-34. One factor in Oglala tracking of the Cheyenne move after 1834 was clearly to capitalize on the resulting demand for horses by the Missouri traders.

⁵³ Previous accounts of the Oglala move southward assume a simple response to fur trade blandishments. See Hyde, *Red Cloud's Folk*, 43-46; Remi A. Nadeau, *Fort Laramie and the Sioux* (Englewood Cliffs, N.J.: Prentice-Hall, 1967), chap. 2.

⁵⁴ Bray and Bray, *Joseph N. Nicollet*, 261. Nicollet designated the Oglala proper as the Hunkpatila and the Kiyuksa as the Kuinyan, names properly borne by constituent subgroups of their respective parent bands.

⁵⁵ John C. Ewers, "The Horse in Blackfoot Indian Culture," *SIBAE Bulletin* 159 (1955): 24-27; Thomas R. Buecker, "A History of Camp Robinson, Nebraska, 1874-1878," Masters thesis, Chadron State College, Chadron, Nebraska, 1992.

⁵⁶ For early nineteenth century Miniconjou migrants to the Brulé, see Hassrick, *The Sioux*, 28; Hyde, *Spotted Tail's Folk*, 18-19; Susan Bordeaux Bettelyoun, "My Mother Huntkalutawin," Bettelyoun Collection, MS 185, Nebraska State Historical Society Archives, Lincoln; William J. Bordeaux, *Conquering the Mighty Sioux* (Sioux Falls, 1929), 9.

⁵⁷ Stephen Return Riggs, "Journal of a Tour from Lac-qui-Parle to the Missouri River," *SDHC* 13 (1926): 330-44; Bray and Bray, *Joseph N. Nicollet*, 260. Cf. Harry H. Anderson, "An Investigation of the Early Bands of the Saone Group of Teton Sioux," *Journal of the Washington Academy of Science* 46 (1956): 87-94.

⁵⁸ *SDHC* 9:206 f.; Denig, *Five Indian Tribes*, 25; Kingsley M. Bray, "The Political History of the Oglala Sioux: Part 2—Breaking the Oglala Hoop, 1825-1850," *English Westerners' Society American Indian Studies Series* (London, 1985), 5-6.

⁵⁹ Denig, *Five Indian Tribes*, 28-29; *Proceedings of a Board of Commissioners*, 53, 58.

⁶⁰ George Catlin, *Letters and Notes on the Manners, Customs, and Conditions of the North American Indians* (New York: Wiley and Putnam, 1841), 1:222; Denig, *Five Indian Tribes*, 29.

⁶¹ The Wind winter count entry for 1845, given in Lakota only, seems to report a Sans Arc visit to a band with previous Brulé affiliations. Thenceforth the count records Northern Teton and ultimately Cheyenne River Reservation events. Howard, "Two Dakota Winter Count Texts."

⁶² Keating, *Narrative of an Expedition*, 404; Bray and Bray, *Joseph N. Nicollet*, 260. A trend towards increased Sihasapa hostility clearly evident in the 1850s was reversed after 1865.

⁶³ Interview with He Dog, Scudder Mekeel to George E. Hyde, Aug. 26, 1931, Hyde Papers in author's collection; John Colhoff to Joseph Balmer, Feb. 9, 1949, transcript in author's collection.

⁶⁴ Denig, *Five Indian Tribes*, 25 ff.; Stanley Vestal, *New Sources of Indian History, 1850-1891* (Norman: University of Oklahoma Press, 1934), 193 f.

⁶⁵ Lt. G. K. Warren "Diary," Sept. 23, 1857, New York State Library, Albany. Transcript furnished by James A. Hanson. The same epidemic caused the deaths of 136 Sihasapa people.

⁶⁶ Lucille M. Kane, trans. & ed., *Military Life in Dakota: The Journal of Philippe Regis de Trobriand* (St. Paul: Alvord Memorial Commission, 1951), 144; Gray, *Centennial Campaign*, 319. Profilled total lodge figures are derived from Graph 4.

⁶⁷ Olson, *Red Cloud and the Sioux Problem*, 131, gives a contemporary assessment of Red Cloud by Sitting Bull.

⁶⁸ Cf. Margot Liberty, "The Sun Dance," in Wood and Liberty, eds., *Anthropology on the Great Plains*, 164-78, which suggests a minimum population of 2,000 as one factor favoring a sustainable contemporary Sun Dance complex.

⁶⁹ *Proceedings of a Board of Commissioners*, 19.