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**THE EVOLUTION OF THE AGRICULTURAL SETTLEMENT PATTERN OF THE
SOUTHERN CHEYENNE INDIANS IN WESTERN OKLAHOMA, 1876-1930**

The University of Oklahoma

Ph.D. 1984

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THE UNIVERSITY OF OKLAHOMA
GRADUATE COLLEGE

THE EVOLUTION OF THE AGRICULTURAL SETTLEMENT PATTERN
OF THE SOUTHERN CHEYENNE INDIANS
IN WESTERN OKLAHOMA, 1876-1930

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
degree of
DOCTOR OF PHILOSOPHY

By
ROBERT PASCHAL NESPOR
NORMAN OKLAHOMA
1984

THE EVOLUTION OF THE AGRICULTURAL SETTLEMENT PATTERN
OF THE SOUTHERN CHEYENNE INDIANS
IN WESTERN OKLAHOMA, 1876-1930
A DISSERTATION
APPROVED FOR THE DEPARTMENT OF ANTHROPOLOGY

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ABSTRACT

The development, or lack of development, of American Indian agriculture after the subjugation of the Indians by European-Americans, has often been studied as merely one component of the general accommodation ("acculturation"), or failure of accommodation, of Indian societies to non-Indian cultures. In this dissertation, however, the methods of ethnohistorical research are employed to demonstrate that the rate of adoption of economically advantageous agricultural innovations among the Southern Cheyenne Indians of western Oklahoma, during the time period 1876-1930, was not necessarily associated with the adoption of many other aspects of non-Indian culture.

In particular, it is shown that the non-Indian ideal, enforced to some extent by the Bureau of Indian Affairs within the context of general allotment policy, of a settlement pattern characterized by independent, dispersed, nuclear-family farmsteads was not necessarily conducive to agricultural development. To the contrary, comparisons among the several Southern Cheyenne farm communities indicate that greater success in agricultural growth by some communities than others was largely dependent on the degree of success attained by the Indians in utilizing such forms of cooperation as are usually facilitated by nucleation of settlement.

Emphasis on achievements in cooperation proved of more explanatory utility than theories of agricultural growth that feature the importance of increases in community demand for food resulting from increases in population pressure, or theories that stress the importance of degrees of proximity of farms to marketing facilities. These factors seem to have helped to shape some local configurations of agricultural settlement during certain time periods. More important than increases in gross population numbers, however, were increases in effective manpower (the value of "human capital"), resulting from better integration of the activities of Cheyenne wives and husbands in the division of farm labor, and from progress in "on-the-job" training of Cheyenne farmers. More important than relative proximity to marketing facilities was degree of development of cooperative marketing patterns, which permitted Cheyenne farmers in some communities to adjust the timing of their sales to the fluctuations of farm market prices.

THE EVOLUTION OF THE AGRICULTURAL SETTLEMENT PATTERN OF THE SOUTHERN
CHEYENNE INDIANS IN WESTERN OKLAHOMA, 1876-1930

CHAPTER I

INTRODUCTION

1. Overview of the Chapter

This study will deal with the basic units of the Southern Cheyenne community the "camp" or "camp-village" composed of a small number of extended families, camps which featured matrilineal residence customs as the primary mode of group recruitment. The study will analyze the evolution of the Southern Cheyenne sedentary horticultural settlement pattern in terms of such units and relational principles. The time period of this evolution includes a phase of closed reservation land-base (1869-1891). The analysis will, however, focus in greatest detail on the so-called "trust period" that followed allotment in severalty of a portion of reservation lands to the Indians, and opening of "surplus" reservation homestead tracts to non-Indians, in 1892.

First, this Introduction will set forth reasons for selecting the particular social unit in question, rather than more comprehensive units. Next, a main argument will be developed, involving the conflicting implications, for agrarian adaptations, of tendencies expressed through the social unit's development, on the one hand, and,

on the other, the strictures of federal public land law and policy, as enforced upon the Indians by the Bureau of Indian Affairs (BIA).

Three further sections will follow, each of which will relate more particular arguments about the interaction between the social unit's evolution and the development of federal land law and policy; each of which will express the degree to which a community-subsistence orientation could be discerned to compete with a BIA-enforced "family-farm"/ commercial-market orientation. The first of these three sections will seek a substantive justification for relating the general argument to such a subsistence-commercial interaction. The second will discuss the relevance of formal models of agricultural development to analysis of the interaction. Finally, the third will discuss the limitations of such formalism, and explain why the analysis must sometimes be conducted in more substantial and detailed terms.

2. The Subject and its General Treatment

This is a study of forced change in the adaptive base of the Southern Cheyenne ethnic group. The change was forced from a base of nomadic hunting and trading, throughout much of the Southern Plains, to a base of farming and marketing upon fixed land units along the waterways of northwestern Oklahoma. This, sort of process has often been treated under the rubric of "acculturation." To what culture, however, the Southern Cheyennes might have been "acculturating" in the period under examination is far from clear.¹

The pattern of homesteading in the American West represents a crazy quilt of nucleated settlements of diverse ethnic groups.² In the case

of northwestern Oklahoma, these included Black communities.³ Considering, however, only first-generation European immigrant groups, the concentration within the study area of German-speaking, Russian-speaking, Polish-speaking, and, at the eastern margin, Czech-speaking communities is striking, in maps of the settlements arising in the 1890s shortly after the opening of the Cheyenne and Arapaho Reservation to non-Indians.⁴ Furthermore, it was such ethnic communities, for the most part, that represented the greatest permanency of settlement in these early times, and even later, in such trying eras as the Dust Bowl and Depression years.⁵

In contrast, the American-born component amongst the new homesteaders represented a markedly unstable element in much of this time frame. Limited commitment to new homesteads was evidenced, and there was a rapid turnover of claimed lands, or simple abandonment of them.⁶ Also, during much of the time period of this study, the political and judicial contexts of the evolving Territorial (1892-1906) and State governments of Oklahoma were extremely fluid.

In short, the creation of a model "culture," however complexly defined, to which the Southern Cheyennes might have been "acculturating" during this time span, would require an analytical exercise on such a scale as to require a full dissertation. The intellectual validity of such a study would, in any case, be far from indubitable. Such an exercise would certainly have to involve careful control over the data concerning the various subcultures of the Territory and State as a whole, including the Southern Cheyennes and other Indian groups. Thus, an "acculturation" study might be seen to imply a most vicious regress.

Another, more apparently profitable, course would be to examine the Cheyenne case in the manner of recent studies of "ethnicity."

Maintenance of identity through shared symbology, maintenance of boundaries through re-enforcement of common interests, solidarity and pooling of resources—these are popular subjects today in anthropology, and other social sciences, and rightfully so.⁷ The present study, however, will not deal with the circumstances in these terms, at least as a matter of main themes and general methodology. Work with the Southern Cheyennes from this perspective of ethnicity is already being undertaken, prominently by Dr. John Moore of the University of Oklahoma, and this undertaking is one of great integrity and thoroughness.⁸

Related to such approaches toward ethnicity are those treatments which are applied to the decline of traditional authorities and elites in the face of manipulations emanating from elements of the broader political context. The consequences of such erosions of the traditional structure of authority, of the cohesiveness and viability of the ethnic group, may tend to be detrimental to individuals associated with the group, who, stripped of their cultural identity, may become the prey of "anomie," of general demoralization. These, indeed, are phenomena of great importance, and are currently a subject of investigation by the most erudite of contemporary scholars of Cheyenne and Arapaho history, Dr. Donald Berthrong of Purdue University.⁹

In the cases of such endeavors, however, this investigation will have little to add or amend. Its concerns are with the survival of the individual Cheyenne through involvement in domestic economic groups and activities. Larger corporate groupings and major authority structures

are significant for such efforts at survival, yet study of the situation at a very basic level may yield some insights less obvious from more comprehensive perspectives.

3. The Main Argument

In the following analysis, my main argument might be simplified into terms that would seem, especially in contrast to the somber themes struck in those studies noted in the preceding section, remarkably Panglossian. It will be argued, indeed, that commitment to sedentary village horticultural life by the Southern Cheyennes produced little distortion in their most basic social structural features. Furthermore, the authorities supervising the economic transition fulfilled fairly adequately their basic legal commitments.¹⁰

The difficulties of the transition, however, derive from the fact that the federal land policy framework within which these authorities operated was not compatible with commitment to sedentary village subsistence society. This incompatibility arises from a number of aspects of the land policy. The difficulties generated from these aspects affected all agrarian communities and sovereign groups constituted west of the original 13 states; the effects were not peculiar to Indian tribes as residually sovereign entities, nor to Indian camps and villages as agrarian settlements. I am hardly the first scholar to point this out.¹¹ This entire issue requires a full chapter treatment, and will be the subject of the next chapter of this dissertation. The general discussion will draw upon various secondary sources, but the discourse will be punctuated by pertinent examples from

the Southern Cheyenne situation. Some general points must be mentioned here, however, to verify the general relevance of the issue. Full demonstration of such validity, of course, will have to wait upon the full chapter treatment.

First, the seizure and disposal of much of Indian Reservation lands as "surplus" by the Federal Government was merely a function of the Nineteenth Century federal fiscal policy under which public land sales were often the chief source of government revenues. Books, however, have been written, with titles like "The Rape of Indian Lands,"¹² that address the problems of Indian reservations as if they were the only entities of limited sovereignty under federal hegemony that ever had lands taken over for federal revenue purposes. Actually, surrender of control over most of their lands by the western U. S. Territories was the price they had to pay for admission to statehood, which is to say, absolute federal guarantee of residual sovereignty rights, to whatever extent such "rights" could ever be pressed.

To qualify for statehood in 1907, Oklahoma government experienced a most severe loss of land, since only 4.6 percent of the land remained for state disposition. Further, Oklahoma was barred from selling any of its mineral rights until 1915, and was only allowed to lease them through federal trusteeship procedures. Of course, the standard 5 percent of all federal land sales proceeds was to be turned over to the state, but not for discretionary state appropriations, or for transportation or river basin development as in other states, but only for specified capital improvements related to schools. Part of the lands reserved to the state, indeed, could only be dealt with as highway

right-of-ways.¹³

Earlier, in the case of the allotment in severalty of the Cheyenne and Arapaho Reservation within Oklahoma Territory, 1891-1892, and differing markedly from the case of many other Indian land areas, all land titles effectively devolved upon the federal government. Each Indian individual received a "trust patent" to a chosen quarter-section "allotment" (160 acre tract) of land. Such "patents," however, represented a legal fiction, in effect promising a genuine patent in fee simple, or genuine discretionary ownership rights, upon proof of "competency" after a 25 year period.¹⁴

A legal ambiguity thus entered into the case. To some degree, the situation resembled the kind of period of trusteeship imposed upon certain state lands, as in the case of Oklahoma state lands containing exploitable mineral deposits. The legal character of the individual Indian allottee, however, offers grounds for consideration of other aspects of federal land law. This pertains to the fact that definition of lands as "surplus" for federal disposition had become an important general legal matter in the early 1800s, because of the number of "squatters" already on western lands at the times of state and territorial land cessions.

In some early cases, squatters were allowed no special rights. For instance, in Alabama and Mississippi, genuine patents had been issued to individual Creeks, Choctaws, and Chickasaws. Much of the remaining state lands were legally surpluses in excess of lands patented to Indian and other individuals, but were largely reserved to the Indians in the sense that at least part of the federal sales revenues from these lands

were to be returned to the tribes for collective improvements. This attitude toward Indian tribal sovereignty reflected fairly closely the logic of federal policy toward sovereign states of the Union.¹⁵

Public pressures, however, by 1841 most effectively, brought squatters some firm rights to limited acreages if there was demonstration of actual tract settlement rather than speculative purpose, and if the land was subjected to "improvements."¹⁶ Such "preemption" rights were only conferred as stipulating promises to pay for the lands involved, upon actual opening of the lands to settlement through territorial cessions. Later, the Homestead Act of 1862 eliminated most stipulations of payment (and of confinement to federally surveyed lands), but fixed the "family farm" land unit as a quarter-section, and the requirements of actual occupancy and tangible property improvement were continued.¹⁷

By the time of Cheyenne allotment, requirements for "improvement" had become increasingly more demanding. Most especially, the "Timber Culture Act" of 1873, had required development of extensive stands of trees on quarter-sections as a condition to fee patent issue, in the Dakotas, Nebraska, and Kansas. This led to the grand effect, given the adverse climatological conditions for orchard establishment, of discouraging small farmers and moving the lands quickly into the hands of land speculators.¹⁸ Even in Oklahoma, the acting agent at the Cheyenne and Arapaho Agency was forced into using his own money to purchase 50 peach trees for the Indians in 1886.¹⁹

The repeal of the "Timber Culture Act" in 1891, did not represent a

major change in the trend of Federal land policy toward a "conservation" strategy. The government was beginning to recognize increasing limitations to the use of direct, outright land sales (especially of unimproved lands) as fiscal instruments. "Conservation," instead, was becoming the driving policy. This meant that the Public Domain should be "improved" in order that land values, hence government revenues from leases and deferred sales, should be increased. In the case of the Cheyenne and Arapaho, pressures toward tree-planting in particular were being reapplied by 1908.²⁰ Even in 1927, a stern letter could still be written to a Cheyenne whose success at raising corn and fodder was considered to be marred by lack of attention to orchard plantation.²¹

The legal status, then, of a Cheyenne patent could have been considered in legal language applicable to homesteading or preemption rights and obligations. Sometimes the language of preemption was indeed considered with respect to patent "trust" status.²²

The implications for the present study are clear. First, federal responsibility required the fixing of individual settlement and economic activities on individual allotments, precluding any tolerance toward nucleation of settlement or cooperation in economic functions. Second, moneys deriving from government-supervised leasing of "trust" lands, as well as from the 5 percent interest annually accrued upon the dollar valuation of "surplus lands" returned to the public domain upon allotment, were moneys to be channeled as much as possible into capital improvements, or else to be used as subsistence rewards for stable residence on individual allotments. Third, decisions as to the "competency" of an individual Cheyenne to receive true patent to his

allotted land would have to have been more contingent on stability of residence on an allotment parcel, and on the extent of tangible "improvements" of allotments, than on any measure of actual success of the Cheyenne individual at farming, or general economic independence. All these points proceed directly from the quasi-homesteading or quasi-preemption characteristics attendant upon the legal fiction of "trust" patency.

Such considerations as these, I shall contend, explain many failures in Cheyenne commitment to sedentary village horticultural life. Much more, of course, needs to be said about the dimensions of federal land law and policy. Especially, it will be important to delineate obstacles to village horticultural success implicit in the effects of the rectangular coordinate characteristics of the American Land Survey System, a major concomitant of federal land-planning in the American west. Briefly put, nature obstinately refuses to parcel itself into quarter-sections as basic ecological units. The result has been the various phenomena often referred to in general as "farm fragmentation."²³

There are still other consequences of federal land policy for agrarian settlement in general that have much bearing upon the Cheyenne case. Among the most prominent is the development of tenancy patterns as opposed to direct operations by owners.²⁴ Also of great importance was the general pattern of rapid turnover of ownership of the western land parcels, connected as it was to the prevalence of land speculation.²⁵

These matters, as I stated earlier, will be given an overview in the next full chapter of this dissertation, but their particular

significance will be constantly re-emphasized throughout the entire study. Their importance should not be understated. On the other hand, their implications are not restricted to the spatial and temporal bounds most pertinent to this study. More particular arguments concerning the factors underlying the development of the Southern Cheyenne agrarian settlement pattern should be set out, and this will be done in the remaining sections of this introductory chapter.

It remains only to mention that the BIA has presented a somewhat different facade since 1930, from that which was clear and more revealing prior to 1931. Of course, BIA propaganda concerning its supposed interest in Indian welfare in general was never lacking.²⁶ Devastating testimony, however, before a U. S. Senate Subcommittee in 1930, demonstrated just how little effort the BIA actually had put forth toward improving the general welfare of the Southern Cheyennes.²⁷ In 1931, the Board of Indian Commissioners announced "a complete reorganization of the bureau," putting greater stress on "human relations."²⁸

Whether this and other reforms of the 1930s actually made any great difference will not be the concern of this dissertation. The analysis will not be carried past 1930. This is partly due to the difficulty involved in evaluating such reforms, but also to difficulties in controlling for Great Depression and Dust Bowl effects.

4. Subsistence and Commerce: the Substantive Contrast

"Commitment to sedentary horticultural village life" is an

elaborate formula. I have used this phraseology because I am not arguing that Cheyenne agriculture was purely a disposition toward maximizing agricultural production under any circumstances. To the contrary, I contend that the stable agrarian adaptation was to some extent subsistence-oriented and geared to the camp, or small village population. Attempts by the BIA to enforce a simple-minded market orientation resulted in setbacks to horticultural adaptation.

Indeed, the first major commitment to horticulture was by a Cheyenne camp as a whole, and was primarily a reaction to the termination of licensing of extra-reservation hunting, in 1875.²⁹ There was a further discouragement in that year and the following, against hunting on the Reservation at any great distance from the Agency offices at Darlington. Additionally, there was a temporary suspension of ration issues in early 1876, coincident with military orders to confine all Indians to the Darlington area for all purposes.³⁰

Into these circumstances was plunged one of a number of "bands" of Cheyenne "hostiles" who were confined to the Darlington area upon surrender to the authorities in early 1875.³¹ One of these "bands," identified by the name of its war leader Big Horse, quickly settled into a village. In fact, it was pointed to by John H. Seger, then superintendent of the Cheyenne and Arapaho Manual Training School, as the clearest example of how "a camp of Red People is like a village."³² It was this camp that produced, in the spring of 1876, the first reservation Cheyenne farming community. Clearly, this was a reaction to the basic subsistence needs of a particular village, a village that intended to retain its social integrity in the face of dire

circumstances.

The horticultural technologies adopted were whatever came to hand, even butcher knives.³³ Despite the evident lack of basic tillage, planting, and reaping instruments, as well as seed, Indian agent John D. Miles, thought that horticultural activity could be financed by the Indians themselves if they acquired wagons and harness sets, and contracted for long-distance freight haulage.³⁴ Furthermore, despite the obvious emergency-subsistence character of the actual horticultural endeavors, the BIA officials insisted that the operations represented a positive Indian attitude toward assimilation into white culture, with the Indian "standing squarely by the agent."³⁵

The general BIA plan, built upon this simple example of survival agriculture in 1876, was set out in the following manner. The Indians would haul their own rations from Wichita, Kansas to Darlington Agency in wagons to be procured through the Interior Department, ostensibly as appropriations for farming purposes. These wagons could then also, it was argued, be used to encourage the Indians in commercial farming pursuits. Extensive commerce would require wagons, of course, if sufficient produce was to be transported for marketing purposes.³⁶

It will be my contention, set forth fully in a later chapter, that the BIA pretention of commercial marketing encouragement in the reservation period was absurd. There was little agricultural activity above the subsistence level for any horticultural people, white or Indian, on the Great Plains in any area far removed from the railhead. Rather, the BIA plan was a rationalization for manipulating ration issues so that Indian solidarity could be shattered and the Indians

reduced to living in a rural slum near to Darlington.

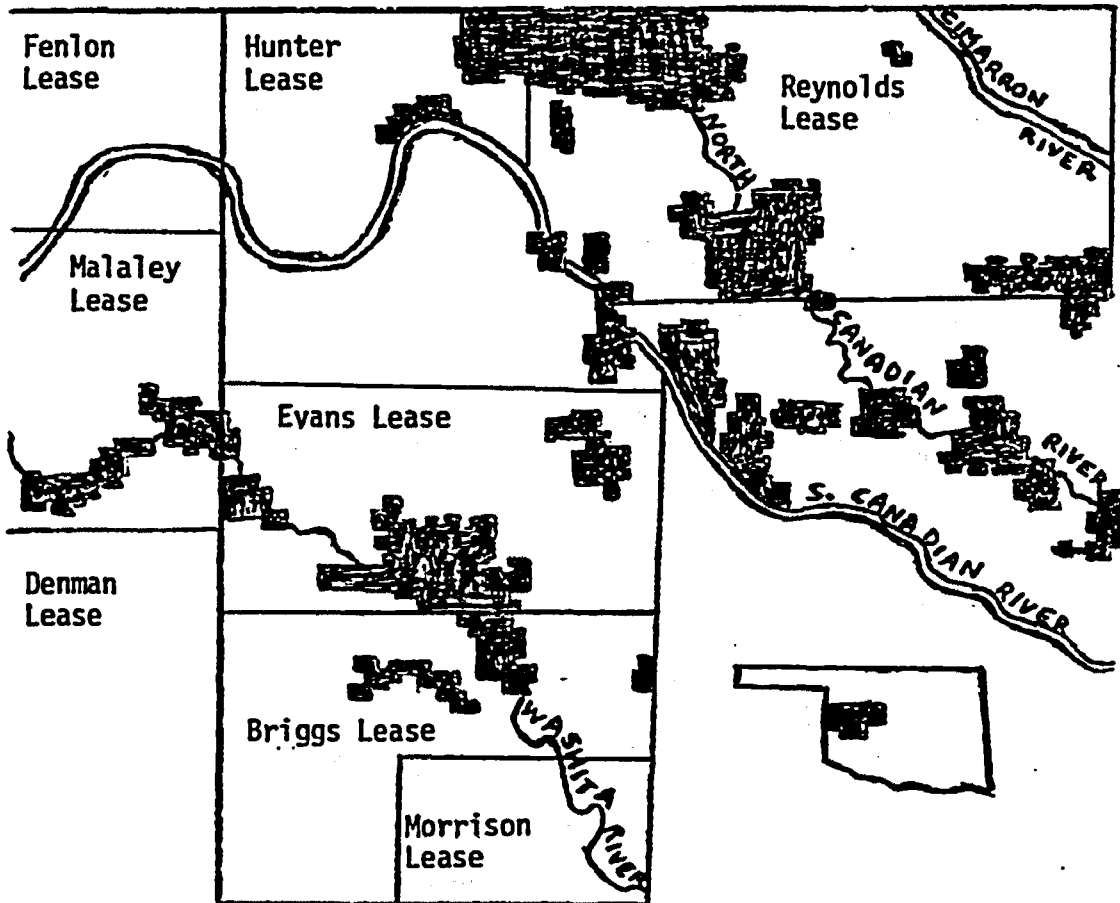
The Department of the Interior, in fact, was not very interested in promoting farming in the 1800s. Indeed, that department fought against the establishment of any independent Department of Agriculture, or the creation of any subdivision of itself that did more than accumulate accounting statistics related to land valuation.³⁷

In the nineteenth century, the Interior Department was in the land sale business. Farming in the western United States Territories led to private claims on the land under preemption and homesteading provisions, and such provisions threatened anticipated federal revenues from western land sales. In the particular case of the Cheyenne and Arapaho Reservation, there were constant contentions by agents that the northwestern, Gypsum Hills, region of the reservation area, and the southwestern mixed-grass prairie area, were unfit for farming. Only the Red Bed Plains area in the vicinity of Darlington, the southeastern-most part of the reservation, it was argued, was at all suited to horticulture.³⁸ Permanent confinement of the Indians to this area, of course, would have left the greatest part of the Reservation area, including most of the river system, free of any Indian preemption or homesteading claims (see Map 1).

Certain private machinations were also pertinent to this trend. Agent Miles was affording generous hospitality involving the lands under his charge, to private non-Indian cattlemen, beginning in the mid 1870s.³⁹ In the years 1882-1883, Miles drew up contracts, without precedent in federal land law, between certain Indian "chiefs" and white cattlemen, effectively giving control of 9/10 of the reservation area to

MAP I

CATTLE CORPORATION LEASES(1883-1885), and
CONCENTRATIONS OF CHEYENNE ALLOTMENT SELECTIONS(1891-1892)



Sources: Berthrong, Cheyenne and Arapaho Ordeal, pp. 97, 171;
John W. Morris, Charles R. Goins, and Edwin C. McReynolds,
Historical Atlas of Oklahoma(Norman: University of Oklahoma
Press, 1965; rev. ed., 1976; new printing, 1981), map 51(see
also maps 3 and 9); Cheyenne and Arapaho Allotment Rolls.

these cattlemen, including all the southwestern grassland and northwestern Gypsum Hills areas.⁴⁰ The contracts contained language suggesting that these environments were too arid to support agriculture, and would be better utilized for grazing. Almost all Cheyenne signatories to these contracts eventually took their allotments in the southeastern Red Bed Plains area.⁴¹ Prominent amongst the signatories was Big Horse, the first Indian turned into a farmer, whose "farming" consisted mostly of transporting, handling, and otherwise being intimately involved in, ration issues, and in aspirations to become a cattleman himself.

From 1884, when these contracts were most fully implemented, there is preserved a "Memo: for Statistics 1884" which was keyed to the Annuity Census by "bands" for that year's 2nd quarter.⁴² This report lists 19 out of 91 "bands" as being the only Cheyenne "bands" having any members engaged in horticulture. The majority of families connected with these 19 groups eventually took their allotments in the Gypsum Hills and southwestern mixed-grass areas, rather than in the Red Bed Plains region. Only 1 of the 19 groups contained any member who was one of the 24 signatories to the contracts drawn up by Miles. Moreover, certain of these non-signatory, horticultural groups and families were stigmatized by Miles' successor as Agent, in 1884 and 1885, D. B. Dryer, as "outlaw bands," "implacable in their resentment of what they term getting on the white man's road."⁴³

Ironical reference to this "white man's road" language was made by Dryer's successor, Captain J. M. Lee, who cleared the reservation, in 1886 (the area was effectively under martial law), of the effects and

employees of the cattlemen lessees, and illegally intermarried white "squawmen," who had been engaging in lucrative cattle ranching on reservation lands. Lee then freed the Indians from artificial attempts to confine them to the Red Bed plains area near Darlington, and encouraged them to disperse as "colonies" to settle in organic communities, farming for their own subsistence. The result was more acreage put into horticulture in the Gypsum Hills and mixed-grass areas, by the Indians themselves, than in the areas of the Red Bed Plains in which the only earlier encouragement of farming had been given.⁴⁴

Indeed, in the Red Bed Plains, along the South Canadian River, most of the actual cultivation had always been done by half-breeds and squawmen with commercial intentions. Nearer to Darlington itself, much preparatory cultivation had been done for the Indians by white employees who thus showed off the exclusive advantages of that area for successful farming.

Specifically, the ironic reference noted earlier referred to Lee's contention that it was the "camp" and "outlaw" Indians, rather than the more acculturated ones, who succeeded best at farming, and indeed at employment generally. This success was all the more impressive, if one considers the fact that the BIA had rarely provided the Indians with any farming implements. What few implements and little seed had been provided before Lee's administration, were confined to Indians who worked on the Agency farm. Furthermore, Lee had such great difficulty in getting appropriations from the Interior Department for farm implements and seed, especially for Indians in the Gypsum Hills area, that some of the money for such supplies came from his personal funds.⁴⁵

A full account of Cheyenne predisposition toward settled horticultural life, during the closed reservation period before allotment in severalty, will be given in a later chapter. The matter as set out here is intended to indicate why the time frame of my study begins in greatest detail in 1886, and to suggest some of the variation amongst Cheyenne groups in the diverse ecological areas of the reservation. Other variables of importance will be correlated with such diversities.

As this point, in summary, the following contention is made: Cheyenne farming development in western Oklahoma was not based on isolated family farms producing for well-organized markets. Insofar as any such configuration appeared in any area at any point in time, it was largely a function of distortions introduced into native arrangements from the framework of federal land policy as administered by the BIA.

5. Subsistence and Commerce: Formal Contrasts

To some extent, formal models and statistics can be used to determine trends in development of economic groupings and activities. There are two contrasting theories of current prominence that are concerned with the development of agriculture with respect to settlement pattern evolution. The first was developed in the early 1800s by the German farmer and economist J. H. von Thunen, and is associated with the term "isolated state."

In its original formulation, the model does not take into account the characteristics of a highly integrated modern industrial society with electrical and fossil fuel resources, mechanized transport, and

elaborate storage technologies. Instead, the basic model concerned a small city and the concentric zones about it that corresponded to different agricultural emphases. These emphases differed according to the pattern of the city consumers' economic demands for agricultural products of varying kinds, and the transportation constraints on the farmer's capabilities for delivering upon demand.⁴⁶

This model will be more fully set out within the body of the dissertation. Its significance lies in its potential for testing various economic data on the type, intensity, and location of Cheyenne farming, in order to determine whether one can objectively account for the greater part of the variation in Cheyenne economic activity as actually related to commercial market areas. Statistical data on types and intensities of agricultural production, and on the spatial distribution of such production, have been found in many Oklahoma Historical Society, Archives and Manuscripts Division (OHSAMD), Cheyenne and Arapaho Agency (CAA) files, especially those titled "Maps," "Indian Houses," "Farmers," "Allotments," "Indian Competency," "Patents," "Agents' Reports," and "Industrial Status Reports." General agricultural data for the area can be located with extraordinary specificity related to particular categories of interest, through use of the United States Department of Agricultural Bibliography for Oklahoma, compiled in 1927.⁴⁷

The second model of importance is often called the "Boserup Hypothesis."⁴⁸ In general, this model postulates that new agricultural

cropping systems and attendant technologies will be adopted only as increase in the population of some more or less nucleated communal settlement requires greater agricultural intensification. Effectively, in the Cheyenne case, general population increase will have been no more important than the general decline over time of access to rations or subsistence-related annuity payments.

The actual characteristics of Cheyenne communities that must be described in this study fall into two conceptually distinct but related categories, kinship and marriage configurations, and demographic structure. The "organic" character of the communities can be demonstrated only by the first category, while the second is essential to the Boserup model. Two complementary approaches have been prominent in anthropology for addressing matters of kinship and marriage.

First, kinship diagrams of actual co-resident persons in their genealogical relationships have been systematically compared with more abstract diagrams structured according to relationships among social roles, as in Spoehr's mode of analysis of the Florida Seminole Camp.⁴⁹ A similar approach has been employed in cases of Cheyenne camps for which lists of members are available. Abstract diagrams for comparison have been derived from Eggan's analysis of the Cheyenne and Arapaho Kinship System.⁵⁰ Concrete genealogical data have been abstracted from a set of copies of genealogies and testimonies developed through BIA "Heirship Hearings."⁵¹

Second, the method of "case law" analysis has been employed by Llewellyn and Hoebel to analyze marriage-residential and property-disposition aspects of Cheyenne society, among many other

topics.⁵² This mode of analysis is being continued upon the foundation of that earlier study, utilizing, primarily, the OHSAMD file "Relations, Family." This methodology will be utilized in the exposition of this dissertation, rather than the methodology involving abstract diagrams.

Control for the effects of demographic structure of significant Cheyenne communities is a more difficult conceptual matter. The problem, of course, concerns the character of the fixed land base for the various Cheyenne communities, beginning at the time of allotment, along with the accelerating decline in availability of non-farming modes of subsistence. The structural evolution of community populations from the demographic bases set at the time of allotment presents several aspects requiring control.

Fortunately, there is little difficulty in identifying the basic units for demographic analysis at the time of allotment. The fundamental exogamous units, the primary bases for camp-villages, can be localized at the time of allotment because of a specific arrangement made in 1891 between the Agent at the time, Charles Ashley, and "chiefs" of "bands." This arrangement was for the "bands" to come in as groups to take allotments in such serial order as could guarantee territorial integrity despite the supposedly individualized character of allotment choice.⁵³

The 1891-1892 Allotments Roll for the Southern Cheyennes has been analyzed from this premise through a methodology originated by Dr. John Moore of the University of Oklahoma Southern Cheyenne Project, and the analysis was implemented originally by John Stanley Johnson of that project.⁵⁴ The analysis consisted in running down the list of

allotments in serial order and noting breaks in the correlation between the serial selections of allotments and the contiguity or close spatial proximity of allotments selected. I repeated Johnson's analysis, and Johnson and I compared notes and found few discrepancies between our assignments. Further, the BIA accounting numbers for Annuity or Ration Census "bands" and extended families from the 1892, second quarter ration issue had been used by the BIA to produce a "corrected enrollment" of the tribe for that year.⁵⁵ The correspondence between the ration "band" memberships and our assignments of members to allotment "bands" was sufficient to further confirm the results of the original analysis.

A full description of the basic settlement pattern at the time of allotment will be given full chapter treatment in an appropriate place in this dissertation. As to the fundamental endogamous units for demographic analysis, they will correspond to the larger communities in spatial isolation that were founded as colonies under Lee's administration, as discussed earlier. These isolates became the subagencies and farm districts of the "trust period" following 1892. In such small populations, complications in computation of vital rates, and associations of age pyramids with survival curves based on life-table analysis, are less relevant than careful substantive examinations of age compositions. If an overall index is required, such indices of aging as percentage of persons over 60 may be employed. Further, cohort-adjusted "child-woman" ratios capture most fertility and nuptiality effects. Also, the ratio of persons aged 15-39 to persons aged 40-65, has served well in yielding an index of replacement-viability of small populations,

an index with clear economic, as well as strictly demographic, implications.⁵⁷

6. Subsistence and Commerce: Techno-environmental Constraints

There are limits to the employment of formal models in answering questions raised in this study, and reasons for more substantive treatments in some areas. Even though a small-group subsistence orientation should be demonstrated to have existed in the situation addressed in this dissertation, yet there can be no doubt that the economic environment contained influences of market forces. Of course as noted earlier, insofar as the BIA promoted agriculture at all, it was the commercial "family-farm." Yet the market itself is a powerful complex of forces that has a way of drawing individuals into its midst like a maelstrom, perhaps tearing a social fabric to shreds.

Part of the question as to extent of market dominance has to do with factors reflecting group solidarity, as I contended in earlier sections. Yet no demonstration of maintenance of basic social pattern can fail to beg the question of the material ways and means of market involvement. If the technology and ecology of Cheyenne agrarian adaptation put individuals at a severe disadvantage with respect to commercial agriculture, then perhaps the agrarian settlement pattern cannot be said to have primarily reflected maintenance of basic traditional community. Instead, the complexion might more appropriately be referred to as the makings of a rural slum.

It will be important, then, to control for the factors of technological and ecological variations among communities. I have

already alluded to certain large-scale physiographic variations within the reservation area ("Red Bed Plains," and so on), and have further alluded to questions of appropriateness of technologies (wagons, butcher knives, peach trees). More detailed examination of these elements of the problem will be interwoven into the body of the dissertation.

The two formal models of agricultural development mentioned earlier will not serve these outlined purposes directly. The Isolated State model, as briefly described in the preceding section, conceives of technology in terms of the requirements of growing and transporting those types of crops suited to particular frameworks of market demand and ecological constraints. Boserup deals with the matter in terms of the affects of population growth on appropriateness of technologies and variations in cropping systems.⁵⁸

The difficulties with these models fall into three categories. First, neither model addresses very convincingly the close connection between successful employment of different type of crops and micro-ecological variations, temporal as well as spatial. Second, neither model addresses the real costs of experimentation and acquisition of techno-environmental managerial skills. Third, though the requirements of cooperation among cultivators is better treated within Boserup's framework than from the Isolated State perspective, the lack of convincing grasp of the nature of social structure is obviously unfortunate for anthropologists working with her model.

Concerning the first point, one must note that anthropologists have not failed to undertake close studies of technological innovation as related to ecological variables in Great Plains studies.⁵⁹ There are

important reasons, however, for drawing upon another source as a model for analysis. I refer to the example of Malin's masterly treatment of the evolution of winter wheat farming in Kansas.⁶⁰

Malin chronicles the trial-and-error development of strains of plants suited to ecological conditions, varying both spatially and temporally.⁶¹ He further analyzes the importance of the development of a complex interrelationship among different crops, different cropping systems, and different tools, under varying microecological conditions, for the success of any agricultural regime.⁶² Since much of this technological complex was taken over by the nascent agrarian civilization in northwestern Oklahoma, Malin's treatment can very effectively be used as a model of proper analysis. Further interest resides in Malin's book because the technologies that evolved were shown to be a compromise between European and American Indian traditions of horticulture.⁶³

The point about acquisition of skills has become an important topic of discussion relatively recently in agricultural history and economics. The longstanding tradition of characterizing agricultural development in terms of the factors of "land, labor, and capital" being impacted by a residual category of "technological change" was not challenged with any dramatic effect until 1964 when Schultz's Transforming Traditional Agriculture was published.⁶⁴

Schultz put forth evidence for a very controversial proposition. This was that human beings, from a technical, not a purely humanistic, point of view, constituted the most important area for investment in agricultural development. There were several aspects to this

proposition. First, Schultz developed the "hypothesis," now associated with Boserup, that increasing density of population with respect to agricultural resources in land could be a positive and not a negative force for real productivity gains in agriculture.⁶⁵

Next, Schultz attacked emphases on "technological change" as something conceptually outside the basic framework of agricultural life. Herein resided the difference between Schultz and Boserup. For Schultz, the analytical concept of "technological change" arises from a failure to understand the fact that "land, labor, and capital" cannot really be completely distinct entities, varying with respect to one another purely as a matter of proportion.⁶⁶ "Technological change," indeed, is a matter of changing interaction amongst the three categories. This changing interaction, in turn, can most clearly be discerned in changing characteristics of the human agents involved in agriculture.

Essentially, then, agriculture is a human enterprise, and the presence of persons within agricultural complexes cannot be reduced to the single factor of "labor." The major consequences of such a viewpoint is to focus attention on the characteristics of the community base of farming. What readjustments at the community level are required in the adoption of new crops, tools, or processes? What is the price of change as measured against the yield? For instance, innovation has sometimes been more marked in subsistence-oriented villages than in large commercial plantations.⁶⁷ This can happen when innovations are at a very small scale, but have immediate implications for community survival that transcend any commercial evaluation of the costs and profitability of such innovations.

Further questions of importance concern the customary and legal commitments between owners and operators in tenancy situations,⁶⁸ or in situations of fixed or declining land base, where the young and the old must make compacts if the young are to remain on the land.⁶⁹

"Technological change," thus, resolves itself into questions about human relationships and human needs that go beyond neoclassical economic models of the economic farm and market demand. This may help to account for the pattern of agricultural development on the reservation under Lee's administration, and throughout the "trust" periods, and beyond.

Lee's assessment, as stated earlier, was that the "camp" Indians made more agricultural progress than the acculturated ones who had gone far down the "white man's road." These acculturated young people brought home from "foreign" schools a number of innovative skills and schemes that did not easily fit into the traditional community fabric of economic demand, let alone the specific techno-environmental bases of reservation life. This assessment was echoed by the more competent BIA "district farmers" far into the twentieth century.⁷⁰

In the light of these considerations, the importance may be seen of the final limitation on the usefulness of the Boserup and Isolated State models to test for capitalist as opposed to subsistence tendencies in Cheyenne agriculture. The fact is that this very distinction may be blurred if the social structures of agricultural development in both cases were similar.

If horticultural advance required inter-generational cooperation, or village-level communications networks for diffusing new techniques, then matrilineal residence and camp nucleation might have been reenforced

by the very market forces that the BIA was determined to use to destroy the extended family household and camp arrangements. This consideration does not obviate the use of formal models, but it does define their limitations, and testifies to the fact that detailed substantive analysis can never be totally dispensed with through technical, theoretical tricks.

7. Recapitulation of Intent

This study has no overwhelmingly lofty theoretical ambitions. It does argue that, at least in some cases, the adaptive value of the extended family and the small, highly integrated community may cross the supposed boundaries of seemingly radical changes in economic base. A further major argument is that, again at least in some areas and periods, centralized land-planning has been detrimental to the development of a stable, profitable agricultural base in the western United States.

The methods to be employed in pursuing these arguments are diverse, but this is because the data are diverse. Some of the data is statistical in structure, and therefore will be addressed with statistical techniques. The emphasis, however, will be on the substantive issues, not the technical aspects of method. This is because there is no formal model, nor will there ever be one, that will fully epitomize any important aspect of human existence.

NOTES

- 1 Some recent defenders of the "acculturation" approach concede the difficulties involved in conceptualizing the "assimilation" of small cultural groups into "large heterogeneous socio-cultural systems (such as the U.S.A.)." See Louis S. Spindler, Culture Change and Modernization (New York: Holt, Rinehart and Winston, 1977), pp.32-33.
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- 3 Michael H. Reggio, "Troubled Times: Homesteading in Short-Grass Country, 1892-1900," Chronicles of Oklahoma 57 (Summer 1979): 205-206.
- 4 Douglas Hale, "European Immigrants in Oklahoma," Chronicles of Oklahoma 53 (Summer 1975): 185, 190, 197.
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- 12 Paul W. Gates, ed., The Rape of Indian Lands (New York: Arno, 1979).
- 13 Paul W. Gates, History of Public Land Law Development (Washington, D. C.: United States Government Public Land Law Review Commission, 1968), p. 315.
- 14 S. T. Bledsoe, Indian Land Laws (Kansas City: Pipes-Reed, 1909), p. 224.
- 15 Gates, Public Land Law, p. 231.
- 16 Ibid., p. 240.
- 17 Ibid., p. 394.
- 18 C. Barron McIntosh, "Use and Abuse of the Timber Culture Act," Annals of the Association of American Geographers 65 (September 1975): 347-362.
- 19 Capt. J. M. Lee to Lawrence Kansas Seed House, 26 March 1886, CAA, File "Darlington Letterpress Book 13," OHSAMD (OHSAMD: Microfilm Rolls, CAA 14).
- 20 Department of Interior Circular 230, 20 August 1908, CAA, File "Relations, Federal," OHSAMD (OHSAMD: Microfilm Rolls, CAA 18).

- 21 Concho Agent L. S. Bonnin to Dawes Whitebird, 17 January 1927, CAA, File "Farmers," OHSAMD.
- 22 Bledso, Indian Land Laws, p. 222.
- 23 The literature in this area has become voluminous in the last quarter century. Some exemplary studies are Hildegard Binder Johnson, "Rational and Ecological Aspects of the Quarter Section," Geographical Review 47 (July 1957): 330-348; Clarence W. Jensen and Darrel A. Nash, Farm Unit Dispersal: a Managerial Technique to Reduce the Variability of Crop Yields (Bojeman, Montana: Agricultural Experimental Station, Bulletin 575, 1963); Norman J. W. Thrower, Original Survey and Land Subdivision (Chicago: Rand McNally, 1966); Hildegard Binder Johnson, "A Historical Perspective on Form and Function in Upper Midwest Rural Settlement," Agricultural History 48 (January 1974): 11-25; Everett G. Smith, Jr., "Fragmented Farms in the United States," Annals of the Association of American Geographers 65 (March 1975): 58-70; Michael D. Sublett, Farmers on the Road (Chicago: University of Chicago Department of Geography, Research Paper no. 168, 1975).
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- 57 Ibid., pp. 356-360.
- 58 Boserup, Conditions of Agricultural Growth, Chapters 2 and 3.
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- 61 Ibid., Chapter 12.
- 62 Ibid., Chapter 17.
- 63 Ibid., pp. 229-230.
- 64 Theodore W. Schultz, Transforming Traditional Agriculture (New Haven: Yale University Press, 1964; reprint edition, New York: Arno Press, 1976).
- 65 Ibid., pp. 17-18, 63-70.
- 66 Ibid., pp. 132-139.
- 67 Ibid., pp. 115, 165.
- 68 Ibid., pp. 167-168.
- 69 Ibid., pp. 172-173.
- 70 See, for example, Jay Johnson, Cantonment District Farmer, to the Board of Indian Commissioners, 13 April 1921, CAA, File "Farmers," OHSAMD.

Chapter II

THE LEGAL FRAMEWORK

When properties are located in a stable neighborhood whether affluent or not, and the various ingredients of the economic calculation require only marginal adjustments to yield a constant rate of return, the most appropriate owner management strategy is a conservative and responsible one...This is not the most appropriate strategy for owners of property set in rapidly deteriorating neighborhoods with rising vacancy and rent delinquency rates.

--Peter Salins, *The Ecology of Housing Destruction*.

1. Chapter Rationale and Overview

Two basic methodological traditions of anthropological analysis of the impact of large-scale sociopolitical systems on the man-land relationships and processes involved in ethnic group adaptation are the concern of this chapter. George Collier has referred to one tradition as an "outside in" approach, in which every phase of investigation of ethnicity is explicitly linked to the "external factors conditioning group internal processes." The other tradition, which, Collier notes, has not been as frequently utilized, is one that goes "from the inside outward, beginning with the local and seeking its external conditions and causes."

My study represents a sort of middle course between the two traditions. The data utilized are almost exclusively administrative in origin. The emphasis, however, is on use of the data in the fashion

recommended by Marc Bloch, as if the reports and correspondence were a kind of "testimony" to be "cross-examined." Thus, the reports and correspondence will be utilized as indirect evidence of the development of Southern Cheyenne subsistence and settlement strategies, as the Indians contended with the conditions established by the federally imposed legal structure of "trust," and the BIA administrative adaptations of that legal structure.

Before proceeding, however, it is necessary to come to grips with the legal structure in a more abstract fashion. Such a treatment is required in order to indicate which areas of the law were more or less malleable in terms of the limits of both BIA administrative discretionary powers, and the coping mechanisms of Southern Cheyenne adaptation. Since the legal framework encompassed both the Southern Cheyenne and Arapaho tribes, the historical instances offered in this chapter to elucidate the actual operation of the legal machinery will be drawn from historical sources as they refer to individuals of both tribes. In other chapters, the focus will be more specifically on the Southern Cheyenne.

This chapter will deal with salient legal topics in four sections. The first will try to demonstrate that the 19th century legal institutions concerned with Reservation policies were closely connected with those concerned with Allotment policies for non-Indians as well as Indians. The economic consequences, however, of the two policies will be shown to be markedly dissimilar. The second section will concentrate on this demonstration of dissimilarity, by focusing on the administration of allotment "trust patents," showing the inflexibility

of the land base implicit in such administrative policy. The third section will continue the argument by examining the roles of the administrators as they interacted with Justice Department officials in litigations with respect to "trust property." The final section will attempt to explain why the trust authority was never disestablished; why few allottees ever received fee patent to their allotments.

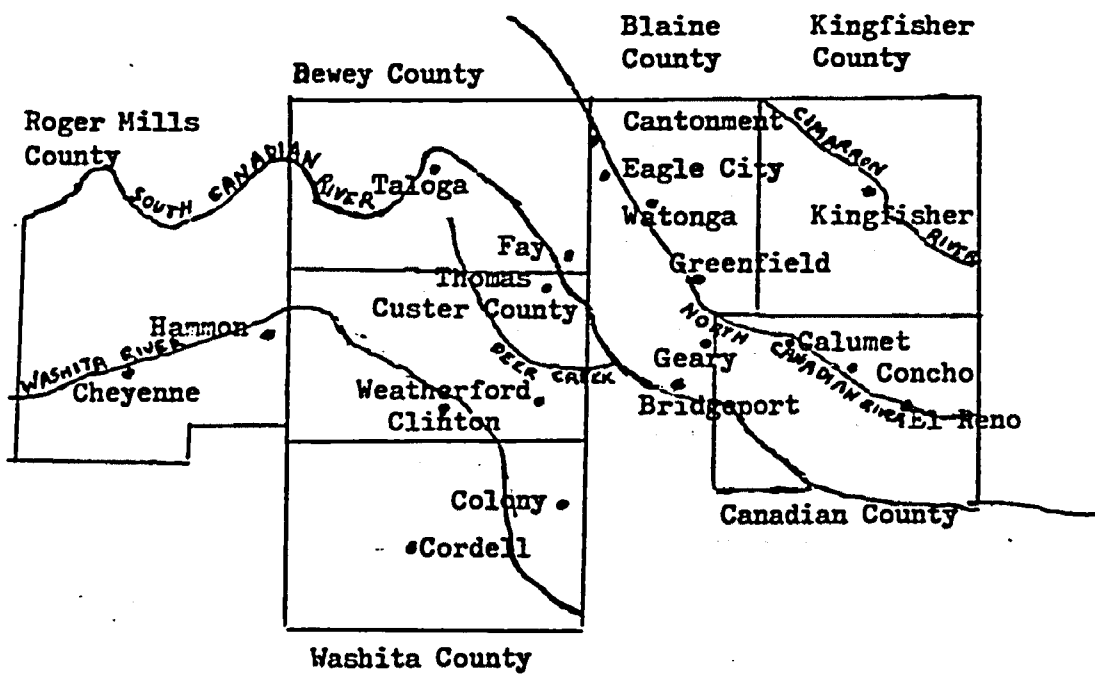
Because there was no single legal jurisdiction that effectively encompassed the Southern Cheyenne and Arapaho allotment area for all legal purposes during most of the general trust period, 1892-1927, some maps for reference need to be presented. Map II displays the Oklahoma counties and principal towns of this era, and Map III delineates approximate boundaries for BIA agencies and Indian Service Farm Districts.

The use of the term "approximate" calls for some explanation. The boundaries of the several agencies, or "sub-agencies," depending on the time period in question, were supposed to be set definitely according to the surveyor's Township-Range-Section method of description. The characteristics of the "trust patent," however, often did not permit Indian land transactions across jurisdictions to proceed rapidly enough to reflect actual residence patterns. Thus, inclusion of an individual on one agency's roll or another's came to depend somewhat on relative proximities, to the different agencies' school plants, and of actual family residences.⁴

The farm districts were first established before allotment by Acting Agent Lee, during the Army's occupation of the Reservation in 1886, as briefly described in the Introduction. There was an attempt to

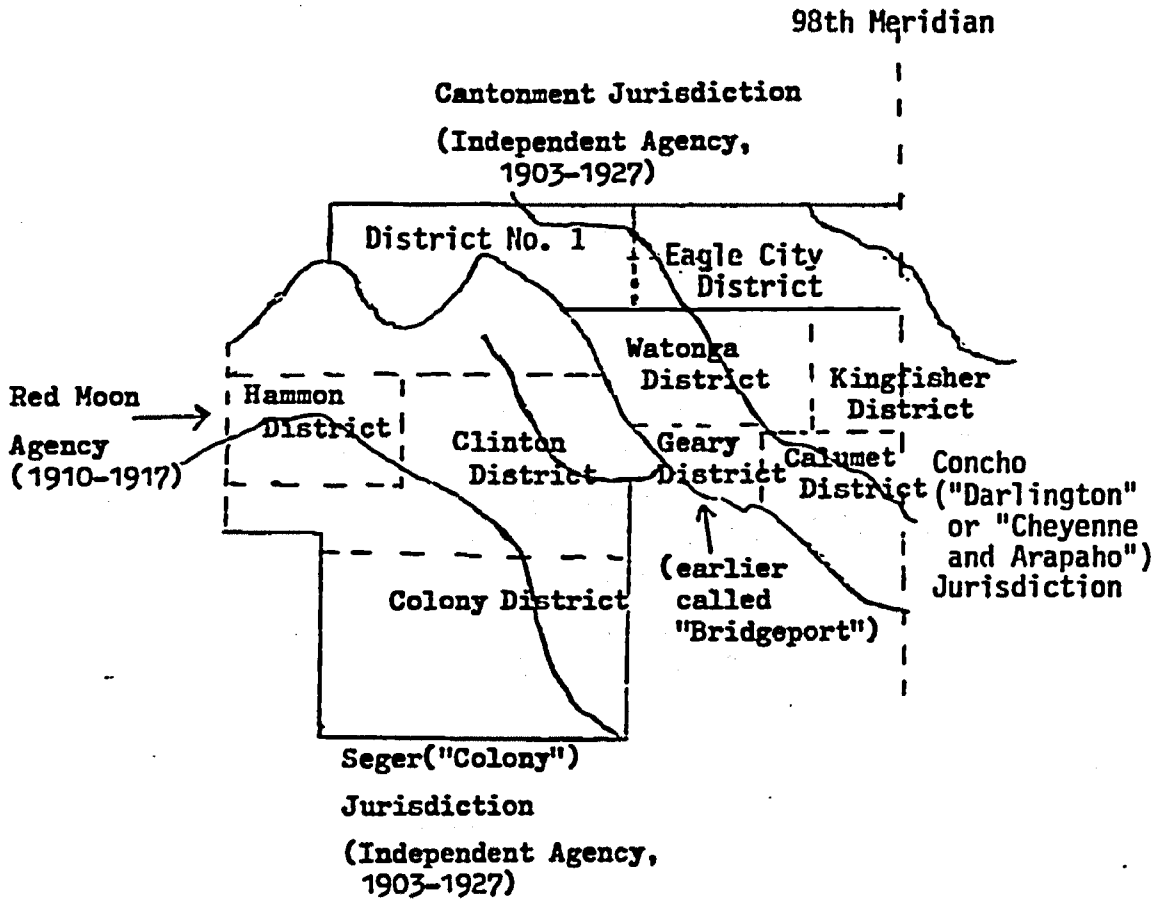
MAP II

OKLAHOMA COUNTIES COMPRISING THE CHEYENNE AND ARAPAHO
SETTLEMENT AREA, AND PRINCIPAL TOWNS OF THE REGION



Source: Morris, et al., Historical Atlas of Oklahoma, maps 77 and 79.

MAP III
CHEYENNE AND ARAPAHO AGENCIES AND FARM DISTRICTS



rationalize district boundaries, after Oklahoma's accession to statehood, along the new state's county lines. However, jurisdictional disputes among district farmers, as well as factional altercations among various Indian groups, resulted in considerable fluidity of boundaries.⁵

All districts and agencies were supposed to maintain close ties and coordinate their policies. The Superintendents and Special Disbursing Agents ("Agents," for short), however, often found it difficult to arrange all-areas conferences. Often such conferences were intended to monitor or supervise all-areas Indian gatherings and councils. Even with this motive at the fore, the agents and farmers sometimes could not get together at one place at the same time.⁶

Reasons for alternate periods of decentralization and reconsolidation of Cheyenne and Arapaho administration are not always clear, and seem at times to be more a matter of apologetics than accurate reflection of circumstances. The Board of Indian Commissioners sometimes expressed scepticism with regard to arguments justifying recentralization in terms of administrative efficiency, since the same arguments were also used for decentralization.⁷

The Board tended to suspect that the financial values of agency locations were well appreciated by merchants and financiers (mostly non-Indian). Thus they thought that movements to reconsolidate were often representative of the machinations of businessmen in different towns.⁸

One official reason for final consolidation of administrative functions at the agency at Concho, in 1927, was described by the Concho

Agent, L. S. Bonnín. It was a function of the difficulty of enrolling families as units, and managing their properties coherently as family estates, given the distribution of the allotments of family members over several different jurisdictions.⁹ Whether this was an accurate reflection of the majority Indian opinion may be doubted. An Arapaho Business committee did recommend consolidation in early 1927.¹⁰ This, however, was a Seger ("Colony") Agency committee, which gave as its reason a desire to achieve administration economies by pooling the funds of all agencies. The Seger Arapahoes had a history of urging reconsolidation—but at Colony, not at Concho.¹¹

It also may be doubted that all Indian Service employees in the areas were in agreement about consolidation. Even after reunification, Cheyenne and Arapaho Agent Bonnín saw fit to remonstrate with personnel in the Seger Area for using the cover of farm chapter organization work to effectively re-establish the Indian Business Committee of the officially abolished Agency, and thus a facet of the administrative network that tightly integrated all Seger area administration.¹²

2. Reservation and Allotment:

Legal Continuity and Economic Discontinuity

The Cheyennes and Arapahoes rejected a reservation established by treaty in 1867. Instead, they chose to settle along the North Canadian and Upper Washita Rivers. The only legal sanction for their occupation of the lands that they had selected, was an executive order issued in 1869, which reserved certain areas of the Public Domain of the United States, for Cheyenne and Arapaho occupation and use.¹³ Thus, no statute

confirmed them in the ownership of the land; they were thrown upon the mercy of the Presidents of the United States.

In fact, the greatest power over Indian reservations eventually devolved upon the federal executive branch. Authority was first granted to the President in 1817 to issue proclamations withdrawing certain acreages or areas from the public domain as special reservations. This type of reservation was originally intended to concern such entities as military posts or wagon roads.¹⁴ However, in a decision of the U. S. Supreme Court handed down in December of 1909, all federal reservations were put on the same legal footing. The concept of "Indian Country" in treaty terms was discriminated from the concept of "reservation," whether or not reservations were founded on "Indian Country."¹⁵

By the time that federal public domain policy was decisively shifting away from a sales strategy toward a strategy of conservation and reacquisition, Indian reservations were coming to be treated as mere components of the public domain. Thus, as part of a feud between the United States Department of Agriculture and the Department of the Interior, a Presidential Proclamation of 1909, was used to turn seven Indian reservations into "national forests." Another Presidential Proclamation, in 1912, turned them back into "Indian Reservations."¹⁶ This sort of thing did not alter the reservation conditions for the Indians significantly. Neither have the few transferences, connected with proceedings following passage of the Indian Claims Commission Act of 1946, of additional national forest lands to Indian reservations.¹⁷

One of the advantages that a reservation system might be expected to have had, over a settlement system constructed through allotment in

severalty, could be described as a greater flexibility of land base utilization by the Indians. Farms might have been nucleated so that cooperative operations would have been more feasible. Actually, however, many farms of the reservation period were small fields crowded together near the BIA Agency offices, or else near mission schools. Many Indian farmers, like the Cheyenne leader Cloud Chief, wanted to be near the Agency or to schools so that they could benefit from innovations introduced on Agency or school farms.¹⁸

A great deal of flexibility in land base utilization could have been secured, in any case, through sophisticated selections of allotments. Homesteaders on the public domain often took their 160-acre homesteads in noncontiguous segments (usually forty acres to each segment), distributing the lands among several different resource areas. Where it was desirable to have all segments of the homestead contiguous, homesteaders might choose to take them in a "long-lot" fashion, setting out the homestead as four forty-acre segments, joined end to end, instead of set together in order to make a square farm. Thus, the homesteader could have a stream at one end of his farm, while placing the other end on a section-line road. Many other combinations were possible.¹⁹

It was the intention of the Interior Department that Indian allottees should receive guidance in the selection of their allotments, so that the allotments would not be in simple half-mile squares, but rather would show the same sophistication found in homestead selections.²⁰ In fact, however, only through sharp questioning were two of the Indian leaders, the Arapaho Left Hand and the Cheyenne Cloud Chief, able to

understand all the options of land selection. Thus, only in parts of Watonga District, where Left Hand's influence was strongest, and in parts of Calumet District, where Cloud Chief's authority was felt most, were there allotments taken in other than half-mile square forms.²¹

The essential legal fact concerning reservations in the United States is that communal lands of any kind had little foundation in either colonial interpretation of common law or the constitutional constructions of the emerging nation-state. The colonists were heirs to the legal legacy of the rising trend of enclosure and allotment in Europe. It is true that there were at times recognized common lands within the early "Townships" of the old northeast. These "commons," however, were considered legally to be transitory frontier phenomena. As soon as circumstances permitted, the "town proprietors" subdivided and allotted the "commons" to new settlers.²²

The policy of allotment in severalty of Indian lands began in 1805, 82 years before the U. S. Congress attempted to make the policy systematic and trustworthy in the "Dawes" Act of 1887. The pre-Dawes allotments accounted for the conveyance of more than seventeen million acres, and the land patents issued to Indians were in fee simple usually, so that the land was immediately alienable. Further, the land acreages patented were of varying sizes, and usually the largest acreages were patented to those members of the tribes who cooperated in making the treaties that facilitated the allotment process.²³

The background of the "Dawes" General Allotment Act of 1887, and its subsequent amendments, has been discussed at length by many and various scholars. In general, it can be said that the most consistent

of rationales for such an Act, from one interest group to another, including the opinions of both BIA field personnel and self-advertised "friends of the Indians," was that allotments of reservations should be facilitated in order to suppress the supposedly harmful influence of Indian community development, in camp and village, in retarding the progress of the Indians toward the idealized agrarian settlement pattern of the self-reliant family farm.²⁴

This rationale resembles to a great extent the ideological expressions of European, especially English, governments and ruling classes, in the times of mercantilist and early capitalist economic evolution. The enclosure of village and manor commons were accompanied by "allotment" provisions, beginning with an Act of English Parliament in the times of Elizabeth I. Such Acts were argued for on the basis of belief that not only the rural peasants directly displaced by enclosure, but also the rapidly growing urban working class, fed by migrations from the enclosed countryside, would congregate and find common ground in their poverty. It was therefore imagined that these elements would roam in lawless, plundering bands unless fixed in elementary family units on agriculturally self-reliant smallholdings.²⁵

Though allotments in severalty in America were, as were allotments in England, a legal expression of mercantilist and capitalist development, the agrarian and individualistic biases embodied in such policies have not proved, in the long run, to be very profitable expressions of such commercial and industrial development. In an economic sense, the biases might be viewed properly as arbitrary government subsidy mechanisms for the benefit of attorneys, abstractors,

and the real estate corporations that achieve economies of scale in dealing with these matters.

In fact, the biases have permitted almost any avenue through which an individual might contribute to the "improvement" of a surveyed tract to give that individual a lien on the tract. These avenues may be related to preemption and homestead claims, involving simple residence and cultivation, but also to certain aspects of leasing of lands, and to myriad aspects of financing land investments of all kinds. The concrete results up to the present are a system in which typical conveyances of residential tracts require months of research into all aspects of title, usually covering land-history records of a half-century, and costing from 2 to 3 percent of the price of the lands in conveyance.²⁶

It is curious, and perhaps unfortunate, that students of Indian land tenure have tended to consider as a special problem the functions of legal heirship determination in hindering rationalization of Indian land bases. The "fractionation" of holdings, or fragmentation of ownership rights to land parcels among heirs at law in the Indian case, has been treated almost sui generis.²⁷ The problem, however, is not one peculiar to Indians, but universal in land law and economics, and it concerns the mechanisms of generation of liens by land investments of various kinds, as well as mechanisms of heirship determination.

This is not to say that there is no problem peculiar to the Indians in heirship determination. The problem, however, is a matter concerning sales of the land of Indian allottees who have died without holding land in fee simple. The so-called "Dead Indian Land" Act of May 1902, gave a

great deal of discretion to officials of the Interior Department, to alienate trust lands held in the name of deceased Indians, and credit the accounts of the heirs of such Indians. Private financial institutions regarded this discretion as excessive, and were reluctant to provide loans to those wishing to buy lands under the 1902 Act. Their demand for statutory provisions for the determination of heirs by the Interior Department, so that title could be cleared for land sale in a reliable fashion, was finally answered in an Act of June 1910 (36 U.S. Stat., 855).²⁸

The 1910 Act generated further problems. Because detailed testimony by all Indians who could possibly be interested in the property to be sold was requisite, heirship hearings were long and involved matters.²⁹ Further, the testimonies of the Indians were difficult for the BIA to interpret. For instance, because of the "classificatory" or "generational" nature of the Cheyenne and Arapaho kinship system, in its terminological aspect, references to "siblings," given the vagueness of the American English kin term "cousin," was a difficult problem, and was recognized as such by both BIA field personnel and the Indians.³⁰

This could be a peculiarly "Indian" problem only if all American Indians had the same kinship terminology, which is not true. Thus, it is not an "Indian" problem, but a Cheyenne and Arapaho problem. The only other problem that might be peculiarly "Indian" or peculiar to the Cheyenne and Arapaho allottees, would be the problem of division of lands amongst heirs, when it was land that was conveyed, rather than land sale proceeds. Such division, however, is what the American

rectangular land survey system was designed to facilitate. For the division to be universally a problem one would have to accept the proposition that microecological diversity is always and everywhere so intense for Indian lands that there is no rational way of ever dividing land-based resources in equitable manners. If the lands of the Cheyennes and Arapahoes in Oklahoma, creek-dissected and eroded, can be considered somehow a test case, then the facts of actual legal partitions of such lands do not support the universal proposition. The "Allotments" and "Patents" files of the Oklahoma Historical Society become dominated, in documents after the year 1926, by partitions of allotments, and I have not found evidence therein of the inevitability of turmoil. Where acreage divisions could not ensure equitable resource allocations among heirs, the more liquid assets represented by checkbook money were often employed to general satisfaction.³¹

The fate of any given Indian trust parcel of land, however, was always a matter complicated by the general character of American land law. For instance, homestead rights were specifically secured to Indians in Acts of 1875 and 1884, on the same basis as the more general Homestead Acts prescribed: continuity of residence and cultivation of a claimed parcel for at least one full year within seven years after filing.³² These rights were sometimes pressed by Cheyenne and Arapaho Indians in typical "squatter" fashion, with respect to trust parcels not originally allotted to the "homesteader."³³

The most important facts, for the present study, about the general consequences of the General Allotment Act of 1887, concern agricultural development. These facts have been examined in aggregate statistics by

the economist Leonard Carlson. His results show that, whatever the faults of reservation management, the figures for compounded yearly growth of agricultural output, For Indians in reservations not allotted before 1884, showed at least a 5 percent annual increase for all but 4 of the 33 reservations in his sample, while 18 of the 33 showed increase in excess of 10 percent per annum. Compounded yearly growth of acres cultivated per capita, up to the times of allotment, was below 5 percent in only 8 cases, and, for 13 of the 33 reservations examined, was above 10 percent annually (the "Five Civilized Tribes" were not included in the sample).³⁴

For these tribes, however, after their allotments in severalty, the experience of the "trust periods" that followed allotments and openings of the reservations to non-Indian settlement, treated by Carlson in the time period 1900-1930, set up conditions adverse to further agricultural development. Thus, aggregate figures for number of Indian farms in operation, ratio of Indian to white values of land and buildings per farm, ratio of Indian to white acreage per farm, and ratio of value of Indian implements and machinery per farm to white implements and machinery per farm, all showed rapid decline for most geographic areas treated in the study, including all those in Oklahoma.³⁵

Carlson argues that the rationale for allotted trust periods, in which Indians were to learn "farming by a gradual process of accumulating skills and capital," was a goal that was already being attained within closed reservations. The opening of the reservations through allotments in severalty actually caused a decline in Indian progress in agrarian adaptation.³⁶

Carlson's theoretical analysis of the effects of allotment is not developed in a set of individually tested, quantified hypotheses, but proceeds by using the latest concepts in pertinent academic economic theory, and illustrating their applicability through qualitative citations of particular cases from selected reservations in their closed and open periods. Since I will address many of the points that he raises with details of Southern Cheyenne cases, and often with quantified data, in other chapters of my dissertation, I will not now give a complete review of his theoretical analysis. Some of his main points, however, resemble some that I broached in my Introductory chapter. Therefore, I will make brief reference to them here.

In the Introduction, I noted that many of the Southern Cheyenne Indians who were damned by certain Agents, in the closed reservation period, as enemies of all aspects of the "white man's road," including agriculture, were in fact doing most of whatever Cheyenne agricultural work was actually going on in the time period. Carlson argues that such phenomena were characteristic of many reservations, and are easily explicable. The explanation is, basically, that the less "acculturated" of the full-blood Indians might be amongst those most likely to "place a high value on economic independence," as the only possible guarantee of some sociopolitical independence from white authorities. He cites several supporting examples from various reservations.³⁷

In the Introduction, I also discussed abstractly some of the features of Theodore Schultz's theory of the importance of human development within the traditions of lasting communities for the diffusion of progressive agricultural strategies. Carlson corroborates

Schultz's theory by stressing that the individualistic characteristics of allotment in severalty tended to isolate individual farming operations to the extent that the Indians could not, without extreme difficulty during the trust periods, learn from one another, or use tribal associations effectively as cooperative financial and training institutions.³⁸

In the case of the Cheyenne and Arapaho Agency, the Indians were briefly allowed to conduct farm operations in "farm companies" or "farm bands," beginning in 1896. Though his practice was not unsuccessful in terms of output and acreage per capita, it was terminated in 1901. It was stopped because "company" leadership had not remained in the hands of the "progressive" Indians originally appointed by the BIA agents, but tended to devolve upon more traditionally established leaders ("chiefs"). Concomitantly, some farm bands were becoming reorganized in terms of membership recruitment according to more traditional, kinship-oriented, grounds for community development than were thought proper by BIA agents.³⁹

Earlier, Captain Lee had experimented successfully in allowing traditional leaders, including Little Robe, to coordinate the use of major farm implements by entire "ration bands" of Indians.⁴⁰ Still earlier, the iron discipline of a captured war leader, Big Horse, over his "band" was associated with the first major commitment to sedentary horticultural life by any Cheyenne group in the reservation period.⁴¹

The destruction of the basic elements of Indian community, which was the explicit aim of promoters of the General Allotment Act, far from being a step toward Indian agricultural progress, was the gravest of

hindrances to such progress. Rather, what success there was in farming after allotment was related to success in resisting the undermining of the basic elements of community. This is a position that would hardly seem controversial to present-day cultural geographers engaged in the analysis of European immigrant pioneer communities in the prairie and plains states of the United States in the late 19th and early 20th Centuries. The greater stability and economic success of most European immigrant groups farming the plains and prairie, when compared to non-immigrant settlement and farming, has been demonstrated very clearly, and the greater success is always associated with the greater capability of the immigrant groups in establishing nucleated service communities.⁴²

In comparing, however, European immigrant experiences to those of non-immigrants, Indian or non-Indian, one finds that large-scale immigrations from Europe were largely functions of the diffusion of free trade policies from England into the Continent during the 19th century. The consequent reorientations of agrarian production to the demands of export trade accelerated the development of enclosure and allotment trends, resulting in large displacements of the agrarian populations of emerging modern nation-states.⁴³ Thus, European immigrant homesteaders on the U. S. public domain had a history that included the effects of sudden isolation of individual farm units from community networks of mutual support. From this history emerged, to some extent, a tradition of coping with problems entailed by allotment, or dispersal of the elements of farm community, a tradition of re-establishing community networks. The Cheyenne and Arapaho Indians were not similarly

pre-adapted to the circumstances of homesteading the public domain.

3. The Value of Administered "Trust Patents," for Indians and non-Indians

Instead of a single linear linkage between savers and investors, what in effect prevails in the United States is a multitier system with each tier corresponding to different economic echelons of society. Minorities, because of their racial and poverty status, seldom get beyond the lowest tier of credit, which is the stratum that plays host to pawnbrokers, loan sharks, and ghetto merchants.
—John Dominguez, Capital Flows in Minority Areas.⁴⁴

The General Allotment Act of 1887 provided for the "grant" of "patent in fee" of 160 acres (quarter section) to each allotted Indian family head, at least 80 acres to each single person over 18 or orphan under 18, and at least 80 acres to each single person under 18 (in the Cheyenne case, each individual was allotted a quarter section⁴⁵). Every "patent in fee" was to be "held in trust" by the federal government for 25 years after allotment, without alienation or encumbrance. Acceptance of allotment conferred full citizenship rights upon the Indians. This Act and its amendments didn't issue as a universal mandate, merely as a prescription for the form of land contract in the negotiations between Indian tribes and the "Cherokee" (Jerome) Commission.⁴⁶

The character of the "trust" has no foundation in constitutional or common law. In constitutional law, the U. S. Supreme Court treated Indian tribes under the terms of federal "wardship," though this was originally a reference to a condition of similarity to wardship, rather than equivalence. Primarily, the term was used with reference to federal claims of preemptive jurisdiction in Indian affairs with respect

to the legislative power of U. S. territorial and state governments.⁴⁷ The BIA mistakenly often opposed "ward" (for "trust patentee") status to fee ("patentee") status in its official reports.⁴⁸ This usage, however, has no legal force in terms of the character of "trust" land restrictions, since holding fee simple in lands does not, in and of itself, exclude legal wardship and trustee assignments.⁴⁹

Since the distinguishing characteristic of title in fee is the unlimited discretion of mentally competent adults to completely alienate lands upon quieting of liens,⁵⁰ it is disputable whether the General Allotment Act clearly provided for the securing of any lands whatever to any Indian individual. In common law, the use of "trust" in real property may consist in "testamentary" arrangements on the behalf of specified beneficiaries of an owner, or in terms of a "living" trust in which equity in land is completely transferred to a trustee in return for all benefits from the land during the life of the original owner, or, to protect the anonymity of a beneficiary from dependents and creditors, in terms of "land trust" in which title is acquired in the name of a trustee and a non-recorded contract sets the trustee-beneficiary relationship.⁵¹ All these usages are predicated on the discretionary powers of original owners in alienating lands, and do not bear upon the characteristics of "trust patents" issued to Indians upon allotment.

In the original theory of allotment "trust," the federal government retained legal title to any given parcel of land reserved from the public domain that was designated in an instrument called a "trust patent," though the instrument was not designed to be a patent in any

legal sense. The association of a named Indian and his heirs with such an instrument, when signed by the President of the United States, was official acceptance of the Indian or heirs as having a lien upon the land in the Indian's name. Thus government relinquishment of title, originally stipulated to be somehow automatic after a lapse of 25 years, should have resulted in a default of fee title to the Indian or his heirs at law, unless the government had meanwhile alienated the land, or permitted further cloud upon its title, or could demonstrate the Indian to be mentally incompetent.

In the General Allotment Act in its original form, encumbrance and alienation were not federal prerogatives. The Act was amended, however, in 1891, to permit considerable discretion to the government in leasing the lands of non-adult, or non-able-bodied adult, Indians, thus permitting generation of liens upon the property through lessee improvements. Further, Acts of 1902, 1907, and 1910 gave discretion to the federal authorities to undertake to clear federal title to, and auction, lands associated with the names of deceased Indians, whether "competent" or non-competent, or lands associated with living non-competent Indians if they or their heirs would consent in the clearing of government title through "relinquishments" of trust patents, in return for the crediting of their trust accounts with the proceeds from sales. Discretion was also permitted to authorities, in Acts of 1906 and 1910, to relinquish government title before the expiration of 25-year contracted "trust periods," if the government considered the Indian associated with the title to be competent, whether the Indian consented to the fee transfer or not.⁵²

"Trust patent" issue, therefore, did not guarantee the securing of particular lands to particular Indians, given the broadening sphere of federal discretion in alienation and encumbrance of the lands. This did not mean, however, that the Indians did not find ways to act, to some degree, as owners of "trust" lands, exercising some legal powers of alienation. The Southern Cheyennes and Arapahoes used their trust patents, where possible, as a sort of negotiable acreage scrip,⁵³ in order to rationalize their land base.

The essential formal aspect involved in trading trust patents derives from the legal tying of trust funds disbursement to actual settlement and improvement of individual allotments by Indians, rather than directly to the Indians' subsistence needs or broader land-planning perspectives.⁵⁴ Thus the language of trust patent trade was put in terms of "exchange of allotments."

Decisions concerning early petitions for exchange of land among allottees were left largely to the discretion of the disbursing agents and their judgements as to the "interests" of the Indians involved, so long as there were proper relinquishments and re-issues of "trust patents" covering the acreages concerned.⁵⁵ The Indians themselves, however, began to stipulate concerning differences in land values between the quarter sections proposed for exchanges in entirety.⁵⁶

Eventually, the Commissioners of Indian Affairs began to state policy with respect to exchanges in terms relating to equality of land values as well as formal requirements for relinquishments by all interested parties.⁵⁷ The question of valuation was first expressed vaguely in terms of general suitability for cultivation of acreages

proposed for exchange. Other appraisal-related considerations, however, were soon adduced, for instance, relative distance from markets.⁵⁸

For a time, in the eyes of the Office of Indian Affairs, proper relinquishments and re-issues of trust patents, in order to keep government title as clear as possible, still remained the principal concern in exchanges.⁵⁹ A requirement that parties agreeing to exchange be notified of any value differences was as far as Indian Affairs high officials were willing to go by 1909.⁶⁰

The strongest push for monetary expressions of the value of lands to be exchanged derived from the Indians themselves. Thus evolved the negotiability of acreages involved in transfer, rather than full quarter section "allotment" transfers. This was expressed in Flint's and Driving Behind's petition for exchange of unequal acreages in 1913. The Second Assistant Indian Commissioner pressed the agent of jurisdiction for a full appraisal of the acreages stipulated, and required trust patent relinquishments and re-issues to reflect acreages originally held as well as those resulting from exchange.⁶¹

By 1922, the monetization of the Trust Patent was being completed. It was allowed that differences in appraised value could be made up for by account transfers, rather than to have to be reflected in unequal acreage exchange.⁶² There was eventually entertained the question whether Indian trust land might be exchanged for fee land, if the matter were handled formally under "land-sale appraisal" and differences in valuation realized in exchange of cash.⁶³ Such transactions, however, quickly passed into the critical scrutiny of federal courts, and were blocked by the Indian Office. The main reason for this was that the

vagueness of rights in "trust patents" prevented any clear way of "restricting" lands that had ever been "unrestricted" in title.⁶⁴

One thread running clearly through most correspondence concerning allotment exchange was the difficult question of "improvements." Since the BIA tended to disburse funds with reference to the needs of improving allotment land values, and was concerned to keep government title as unclouded as possible, the Indian Office encouraged the exchange of allotments in advance of contracting for capital improvements in cases where one family member desired to finance improvements on the originally allotted land of another family member.⁶⁵ This commonly occurred after marriages, when men often wanted to build homes on their wives' allotments.⁶⁶

What I have been describing is not how Indians valued their land in general, but how they realized what value they could from holding "trust patents." The Indians, unfortunately, were not the only group that could manipulate the "trust" character of Indian funds and landholdings.

An Indian with fee title might be no more than a farmer as poor as many non-Indian farmers in northwestern Oklahoma. An Indian, however, with "trust patent" was a continuing resource for exploitation by those to whom the Indian had to turn for financing through chattel mortgage (the land itself could not be mortgaged while the government held title). These over-secured mortgages of brief maturation (often nine months), almost always ensured that the lender could recover the chattel after minimal depreciation, along with any other asset that could be stripped from the Indian or his allotment, under color of foreclosure. Further, the BIA would govern the eventual re-equipage of the allottee

with chattels from trust funds, and these chattels would become security for more mortgages, in an unending cycle. This type of traffic in trust was very common soon after allotment.⁶⁷

By the time of expiration of the original general trust period, this sort of trust traffic had been thoroughly disrupted only in the Calumet and Kingfisher districts of Concho Agency. By 1918, the drive to clear Geary District of the traffic was still underway, and little progress was to be found anywhere outside of the Concho jurisdiction. Operating out of the town of Geary in 1918, the President of the First National Bank, John H. Dillon, "made a practice of lending money to Indians, taking mortgages on personal property--horses, wagons, harness, etc., always being careful to get security worth several times the amount of the loan."⁶⁸

In short order, the Geary City Marshall, with apt homonymy named Leach, performed his principal duty of physically seizing mortgaged chattels, plus any money and any other property present in Indian homes and camps. All proceeds were cheaply sold back to C. W. Dillon, cashier of the First National Bank, in the name of the city, without any pretence of public notification. The firing of Leach was achieved by threatening to withdraw the district farm office from Geary, thus costing the merchants of Geary much of their revenue from Indian purchase orders. The exploitation was not thus ended, however, but merely came to take a new form.⁶⁹

This new development was shaped by the mayor of Geary in 1919, who tolerated sales of highly alcoholic patent medicines by the city's

pharmacies. The Indians were then arrested for public drunkenness or simple possession of intoxicants, and their assets were seized to pay their fines. This process was not disrupted to any great extent until the policy was adopted of refusing to honor purchase orders that had been used by the Indians in dealing with Geary firms. Thus Geary allottees had to begin contracting with El Reno merchants. That this inconvenienced the Indians as well as the merchants of Geary was considered to be of small consequence beside the great discomfiture that resulted for Geary businessmen.⁷⁰ This kind of tactic might be employed in the case of large individual firms as well as entire towns, as in the plan of a Seger Agent to stamp on purchase orders, upon issue to Indians, that the orders would not be honored if presented by the Mercantile Company of Colony.⁷¹

Other conspiracies were less local to the reservation area, though requiring inside help of some sort. For instance, the chattel mortgage operations of I. H. Lookebaugh, Agent of the Mutual Investment Company of Oklahoma City, were very prominent in Cantonment Agency and Watonga District of Concho Agency, in the period of 1914-1917. During this period, Ernie Black, a well-educated Indian, translator for Cantonment Agency, assisted in the trust traffic. Black's role seems to have been primarily one of locating Indians who were desirous of ready money for investment in chattels, or for the use of chattels bought with trust funds in obtaining ready money, and introducing them to Lookebaugh. Cantonment Agent Robert E. L. Daniel eventually tried to disrupt this traffic at its Oklahoma City source by enlisting the help of the postal authorities with regard to mail fraud aspects of the traffic.⁷²

Much of the success of operations against the trust traffic depended on the acumen and persistence of district farmers in gathering sufficient evidence for successful presentation of suits in replevin to regain chattels, or suits for damages if the chattels had been resold at some point to innocent parties. Besides vigor and competence, the farmer required courage, as can be seen in the ease with which the help of U. S. Congressman Scott Ferris was enlisted by "certain businessmen" of Kingfisher County in 1916, in attempting to oust Arthur Crim from the Kingfisher District Farmer position.⁷³

Where the farmer was less honest, or competent, or more easily intimidated, as in the case of Watonga District Farmer A. V. Crotzer, the traffic was not easily disrupted.⁷⁴ When, for any reason, an Agent, like W. H. Wisdom of Cantonment Agency, 1914-1917, was disinclined to place himself in active opposition to the traffic, the position of honest and competent district farmers was made very tenuous.

Wisdom was indicted by a federal grand jury, and put on trial in 1918, along with Ernie Black and Blaine County Judge Ed Baker, but was not himself convicted, as were Black and Baker, of conspiracy to defraud the Indians and the government in connection with sales of lands by Indians recommended to receive fee patents by the Cheyenne and Arapaho Competency Board of 1917.⁷⁵ It was alleged, but never put as a formal charge, that Wisdom's own policy of recommending against any fee patent issue to any Indian was part of a pattern of fraud with many ramifications.⁷⁶

There certainly were many instances of irregularity in Wisdom's handling of the leasing of Indian lands, another aspect of the value of

Indian trust lands for non-Indians, but an aspect more difficult to interpret. Wisdom kept one District farmer, Jay Johnson, off balance through petty criticisms concerning details of filling out forms for lease bids--criticisms so abstruse as to be virtually uninterpretable by Johnson.⁷⁷ The Indians, meanwhile, themselves found Wisdom's leasing policy perverse. Chief Little Man put the matter in the following terms:

Then about leasing the land. The farmers want to lease our lands, and promise to pay so much a year, but then when the time comes, the agent insists on keeping the old lessee, and won't take the new man we want.⁷⁸

Sometimes, Wisdom was remarkably blatant in his disregard for the fine details of legal procedures in leasing. In a letter to the District Farmer at Eagle City he said:

Regarding the leasing of lands, we will discontinue the practice of applications and will accept the highest bid. If any one desires to lease land have them write a letter stating what they will give for the land, signing their first name in full, and forward to this office, we will give it due consideration.⁷⁹

This was rationalized as a response to Office of Indian Affairs objections to the overloading of district farmers with paperwork when they should spend most of their time in the field promoting direct agricultural operations.⁸⁰

Wisdom's policies must also have been very helpful to traffic in trust properties. For instance, he barred his allottees from using the reimbursable funds that the BIA had established by 1916, arguing that the Indians were getting sufficient investment capital already through his office's handling of their lease moneys, as well as the annuities

they derived from interest on the government securities that had been deposited as payment for the reservation "surplus" lands in excess of acreages allotted, which was routinely credited to individual accounts on a pro rata basis.⁸¹ This fund was too often relied upon by all agents in their investment planning. It was considered a great feat in 1905, to get the deposits, representing lease and sale checkbook money as well as government securities, into a bank in El Reno paying 3 and one-quarter percent on daily balances, compounded monthly,⁸² when chattel mortgages were being pressed, usually, against the state's ceiling of 12 percent interest.⁸³

The chattel mortgage traffic, along with the failure of many agents and district farmers to successfully finance capital improvements through provisions of leasing contracts, had a devastating effect on the development of Cheyenne and Arapaho agriculture during the original trust period. By the time of Cheyenne and Arapaho Competency Board Interviews and Recommendations in 1917, the trust traffic had been successfully disrupted only in Calumet and Kingfisher districts, as was noted earlier, with some partial success in Geary District. Thus, the Competency Board found that fully 83 percent of Calumet allotments, and 82 percent of Kingfisher allotments, were associated with Indian ownership of chattels, fixtures other than fencing, or capital improvements--excluding residential housing. Only 36 percent of Geary allotments fitted this description, however, while only 20 percent of Watonga allotments did.⁸⁴ In the Seger Jurisdiction, of Red Moon (Hammon District) allotments, only 10 percent were associated with chattels, fixtures other than fencing, or capital improvements. The

figure for Clinton District was 20 percent, and for Colony District, 24 percent. The figure for the entire Cantonment Agency was only 15 percent.⁸⁵

How could one expect major agricultural advance from persons who were subject, quite literally, to having implements wrested from their hands while engaged in cultivation, or to having their not quite mature crops harvested out from under them, under color of foreclosure? When the wherewithal to farm is not secure from year to year, compounding of agricultural advances is undermined. As a Cantonment district farmer put it, in 1917, "I find that the greatest draw back to them working besides being naturally lazy, is that they haven't any thing to work with."⁸⁶

The ecology of the region made the cycle of financing the means of production, and then withdrawing the means by the following year, into an oscillation of wide amplitude about a continuously downward trend to general economic ruin. The rolling hilly lands and gradually sloping "plains" of the ecotonal region of the central plains in Kansas and Oklahoma--the savannah-woodland "crosstimbers" and mixed-grass prairie region--is the area enclosing all of the Cheyenne and Arapaho Reservation area. Secondary succession in this region does not resemble the common pattern of succession.

The common progression from more xeric to more mesophytic vegetation, found in other subhumid ecosystems, is reversed, from the brief 2-year first period to the 9-to-13 year second period, and productivity declines rapidly.⁸⁷ The sunflowers, crabgrass, and other weeds of the first period produce chemicals from their leaf leachate and

root exudate that destroy nitrogen-fixing bacteria, the seeds of legumes, and even their own seeds, so that the annual "wire-grass" of the second stage quickly establishes itself.⁸⁸

Lessees uncertain of their holding onto the land for long sometimes deliberately sought to " 'fix it,' so that the next man would not make anything off of it," by planting sorghums over and over.⁸⁹ Many freshly abandoned fields were dominated by the sorghum Johnson grass,⁹⁰ which is alleopathic in the same fashion as weeds of the first period.⁹¹ The wire-grass of the long second stage of succession is an annual that starts its growth slowly in the spring rainy season when runoff is greatest, so that natural plant succession cannot stabilize the micro-topography once active gullying has begun.⁹² Thus the generation of abandoned fields by the chattel mortgage cycle and the poor leasing policy fitted well into an ecology of agricultural ruin.

I have not yet built a strong enough case in my contention that the trust patent was a defective instrument. If the ecological situation in the central plains was of the sort found in many other areas, where fallowing is a reconstructive rather than a destructive component in crop rotations, then the generation of abandoned fields would actually have been fortuitous to some degree. This was the case for farmers in the northern plains, where summer fallowing is a good conservation practice. Farmers who abandoned their fields in drought years returned to them to grow better yields than they had before the abandonment. In this case, then, abandonment was a learning process.⁹³

In northwestern Oklahoma, trust lands were not the only lands to be broken out over much of their surfaces, and then abandoned, re-tilled,

and abandoned cyclically. The years of good crops in counties of northwestern Oklahoma in which the Indian population was numerically negligible, which extended from 1897 to 1907, saw most of the surface broken out. Stochastic climatological shocks to the agrarian system over the next decade led to periodic abandonment of fields in these predominantly fee lands.⁹⁴

A demonstration of the effects of enforcement of government possessory rights in "trust" property, in reinforcing common and state-judicial prejudice against the Indians, while achieving little or no economic stability for the Indians, might be taken to indicate more precisely the peculiar defects of the trust patent instrument. To this task, then, I will turn in my next section.

4. The Character of Government Possessory Rights in Litigations Concerning "Trust Property"

The United States Attorney for Oklahoma Territory would have preferred to utilize the broad powers conferred upon the Justice Department, by an Act of March 1893, to defend Indian property against a variety of possible attacks, than to become a sort of ancillary legal counsel in strategies originating in the BIA agency offices. In 1901 a letter was circulated by the U. S. Attorney's Office based in Guthrie, Oklahoma, urging the agencies to use the office on those terms.⁹⁵ The Cheyenne and Arapaho Agency, however, particularly in the period 1897-1899, had most often requested assistance in enforcing the terms of its contracts for the leasing of Indian lands, particularly those concerning the completion of general improvements within a set period in

lieu of some amount of cash rental.⁹⁶

This emphasis on improvements in lieu of cash, caused nothing but trouble in the courts. In equity, the failure of a lessee to complete improvements within the time period of the lease, was often construed judicially as giving the lessee a lien upon the property until the lessee could be shown to be in a financial position to complete the stipulated improvements.⁹⁷

An Amendment of 1891, and subsequent amendments before 1910, to the General Allotment Act gave great discretionary powers to the Secretary of the Interior and his delegates to control leasing of allotted lands of dependents and disabled adults. In exercise of this discretion, the Interior Department authorities were directly responsible to the federal courts.⁹⁸ In demanding, in effect, that an officer of the federal courts should automatically defend any exercise of discretion by an Interior Department official, the BIA agents were placing obstacles upon the U. S. Attorney's office.

Basically, the U. S. Attorney General's Office proceeded in Indian affairs on the basis of the U. S. Supreme Court's construals of the "wardship" status of the Indian. These construals comprised several realistic assessments of the Indian's concrete situation. The Indians had been deliberately rendered weak by federal policy, thus Indian claims upon the government could only be from a position of weakness. The protection primarily required had little directly to do with the activities of non-Indians as private citizens, but rather with the prejudice of state and local legal systems, which could be relied upon to do nothing to redress wrongs done to the Indian.⁹⁹

The Cheyenne and Arapaho Agents, however, persisted in bringing such actions as "Forcible Enter and Detainer" against non-Indian encroachers, squatters or delinquent renters, before Oklahoma Territory Justices of the Peace. The U. S. Attorney, meanwhile, continued to try to convince the agents to keep litigation within the federal courts. He wanted to prevent the cases from passing into equity considerations, and instead to keep them where they could be used to set common law precedents or raise constitutional issues.¹⁰⁰

Concho Agent Shell, however, preferred executive action. He asked for, and received, permission to use federal troops in 1907 to enforce his will upon the non-Indian encroachers. Berthrong has documented how Shell used the publicizing of this permission, rather than actual employment of troops, to force cases to be heard in local courts.¹⁰¹

This could not have helped the Indians a great deal, since U. S. Attorney Embry had emphasized to Shell earlier that decisions favorable to the BIA were almost automatically being heard in appeal by the District Court. This Court, in turn, was delaying decisions on these appeals, resulting in a tremendous backlog of cases by the time of Oklahoma's accession to Statehood in 1907.¹⁰² After Statehood, federal troops were no longer so easily accessible. The main result of Shell's heavy-handed policy was probably to reinvigorate local prejudice against the Indians, by way of stirring resentment against their visible BIA representatives.

With respect to effort against trust traffic, the U. S. Constitution having provided for the inviolably "free" character of contracts, as opposed to the reliance-contracting characteristic of

medieval law,¹⁰³ and in the light of the citizenship status conferred, by acceptance of contract under General Allotment Act provisions, upon allotted Indians, the U. S. Attorney could not easily see how to proceed in such matters. The Indians must fulfill contracts in the absence of evidence of fraud and duress. It seemed that all the U. S. Attorney might do would be to "appear and represent" the Indians in equity appeals.¹⁰⁴

Sometime after 1905, when this feeling was conveyed to the Cheyenne and Arapaho Agency officials, and 1908, since the language contains reference to territorial as well as state jurisdictions, U. S. Attorney Embury produced a brief for Mandatory Injunction, in equity "the counterpart of Mandamus at law," to be used "in the direct form of command, or in the direct form of prohibiting the refusal to do an Act to which another has a right."¹⁰⁵ The brief argued that actions with respect to Indian property were a function of the United States' holding full title to allotted lands.¹⁰⁶ The conditions of injunction were, therefore, likened to those for removal of unauthorized fencing upon the public domain.¹⁰⁷ Indian allottees were construed as having no rights to contract with reference to allotments, and no rights of any kind to allotments beyond those of occupation and cultivation.¹⁰⁸ The negotiable acreage "paper" issued to allottees was not in any sense a "patent" to the land.¹⁰⁹ In short, then, since, within the context of "trust," federal courts could not regard the Indians as being other than weak, the weakness of the Indians' rights in allotted lands, and the weakness of Indians' rights to make contracts referring to property bought with trust funds, had to be made harshly clear.

The U. S. Attorney's office began to file more suits on this basis, after 1907. By 1909, lease payments, like proceeds from heirship land sales, and trust funds in general, could be controlled directly by the BIA without any Indian interfering in how his economic life was run.¹¹⁰

The further implications of this trend were made explicit under an Act of June 1910, which made all Indian property associated with funds handled by the BIA officially the property of the federal government.¹¹¹ Thus, upon advice from the Interior Department, the U. S. Attorney General began directing U. S. Attorneys' offices to file suits in replevin to regain foreclosed lands and chattels, or, in conversion of suit to damages, monetary recompense. The argument in equity was to be that change of form of property did not remove the property from trust.¹¹²

The efficacy of such suits, however, was limited by the rapidity with which the trust property circulated through different stations of the trust traffic rings. Thus, often, suits in conversion to damages had to be brought, after the original filing of suits in replevin.¹¹³ In the case of delinquencies in lease contracts, suits began to be filed with even greater frequency after 1910, but the results were often somewhat embarrassing. This was not due to the failure of such suits; in fact, most were won. The difficulty lay in collecting the judgments.¹¹⁴ Many former lessees had no money and no assets.¹¹⁵

Many, indeed, were hard to find. The tracking down however, of such reprobates was relentless. For instance, delinquent lessee Adolf Kruse moved to Carlsbad, New Mexico, before judgment was rendered,

leaving no property in Oklahoma.¹¹⁶ By the time the County Treasurer of Chaves County, New Mexico, replied to inquiries, Kruse had moved to Roswell, New Mexico, again leaving no assets.¹¹⁷ In Roswell, Kruse was finally located, but he had no money and no property there either.¹¹⁸

As the pursuit of rental delinquents knew no bounds in space, so it knew no bounds in time. Thus, Agents of different reservations would communicate about delinquents in such terms as "We have not received any report as to his financial standing for several years...If at your convenience you could cause investigation to be made...we will certainly appreciate it and stand ready to reciprocate."¹¹⁹

In the matters of suits in replevin, one case, to regain an Indian's horse, was opened by the U. S. Attorney's Office in February of 1919.¹²⁰ After a great exercise in evidence-gathering, during which the horse changed hands in sale several times,¹²¹ and finally died, the case was brought to court in March of 1920.¹²² The suit in replevin, in conversion to damages, was victorious by June of 1921, but the district farmer of jurisdiction found that the defendant, by that time, was penniless, an occasional laborer living with his father-in-law. The farmer noted, however, that the culprit was being sued by another white man, and suggested that some of the money involved in that suit, if any moneys were forthcoming, might be attached to the BIA claim, through the settlement could only be a fraction of the damages awarded in the Indian case.¹²³ This proved to be a fruitless line to pursue, but the district farmer maintained a constant vigil, and, triumphantly, in November of 1923, discovered the miscreant producing some cotton on a lease of white property, which the farmer estimated might come to 10 or 12 bales, which

might be seized at the very time of baling by U. S. Marshals in the cause of Justice.¹²⁴

How much this sort of thing could actually help any given Indian to maintain the continuity of his productive endeavors was a point not often addressed by agents or farmers. In one case, the allottee had the discourtesy to die during the period of litigation, leaving uncomfortable questions about how to enter a satisfaction in the case, so that moneys so-far awarded could be received legally, and further actions taken with respect to the properties of other allottees also involved in the suit.¹²⁵

In another case, the agent of jurisdiction pressed for a collection of at least token damages from a delinquent renter, though the culprit admittedly did "not seem to have a great amount of personal property," because "he has shown a lack of respect for any department of the United States Government."¹²⁶ Clearly, this could have had little direct benefit for the allottee involved. Further, given the clarification of powers and authorities by the Act of 1910, no important legal precedents were at issue. In fact, such actions represented nothing more or less than persecutions of poor non-Indians in order to demonstrate the power and majesty of the BIA. If anyone thinks that prejudices against Indians in northwestern Oklahoma derive from nothing more than a streak of spitefulness in the character of rural whites, let them attend to such data as I have just set forth.

For the Indians, of course, the tragedy lies in the fact that these offenses were done in their name, but often without their consent. Captain Lee had condoned the practice by the Indians of allowing poor

blacks to dwell on Indian lands when the blacks agreed with particular Indians to assist them by improving the lands and giving the Indians in question part of the crops produced;¹²⁷ this despite Lee's attitude toward white squatters, which was entirely negative. Long after allotment, many Indians still entered into informal agreements with blacks concerning allotted lands.

One black named McCoy was occupying the house of Throwing Water in 1917, by agreement taking care of the property while Throwing Water was engaged in business in Geary. When McCoy did not move out immediately upon receiving formal notice from the BIA to vacate, the Geary District Farmer proceeded to locate Throwing Water in Geary and order him to re-occupy physically his house so as to facilitate McCoy's eviction for unlawful entry.¹²⁸ This shows, as clearly as I think any case could, just how much of a "right" to an allotted piece of land was conferred upon an Indian by possession of a "trust patent."

Of course, there were legal provisions for terminating the "trust" with respect to individual landholdings. Supposedly, under the General Allotment Act, every Indian would have an opportunity to hold the land in fee simple. Actually, very few Indians had received trust patents to their lands by 1930. The government tended to deny the Indians' "competence" to hold the lands in fee. What the conditions of "competency" determination were, and how competent, in terms of coherent understanding of what it took to farm successfully in northwestern Oklahoma, BIA officials in fact were themselves to judge an Indian's competency, will be the subject of the next section.

5. Interior Department "Conservation" of Lands,
Indian "Competency" Determination, and Fee-Patents

The state of public domain policy during most of the 20th century has consisted largely in federal land acquisition, reservation, conservation, and leasing. A propaganda document, published by professional lobbyists for forest products industries, put the total, up to June 30, 1963, of such acquisitions within the area of the 48 contiguous states, in dramatic terms. The acreages amounted to "the area of the New England States plus New Jersey and Maryland."¹²⁹

The principal difference of current policy from 19th century acquisition policy, is that there is no longer an emphasis on sale disposition of acquired lands. Now the keyword is "conservation." Wedged between these two periods was an era in which federal policy was gradually de-emphasizing sales, and trying to discover a way of conservatively appraising the value of the public domain as a permanent asset, worthy of investment that would ensure an increasing yield in the future that justified the opportunity costs of decreasing current income to the federal treasury from the levels obtained by sale.

One author has set the temporal bounds of this transitional period between 1890 and 1920.¹³⁰ Another author sets the limits between 1900 and 1950.¹³¹ Both authors agree, however, that the elements of the transition can be dated back at least to 1875.¹³² No matter which temporal limits are preferred, the inescapable fact is that the allotment in severalty of the Cheyenne and Arapaho tribes in Oklahoma, and the general trust periods following, fall almost entirely within the transitional era.

In the opinion of the Interior Department in 1875, the plains area, as well as the deserts farther west, were unsuitable for homestead cultivation and settlement.¹³³ Lands classified as pastoral, however, by the first Public Lands Commission in 1879, were considered to be fit for sale in blocks of 2560 acres to cattle ranchers.¹³⁴ This early land classification work was based upon the United States Public Lands Survey and some piecemeal geological survey work, in areas west of the 100th meridian. Legislations undertaken in this period, for instance, the "Timber and Stone" Act of 1878, confined the area of their applicability to the lands on which the classification was based. By the 1890s, however, the application of such laws to all public domain states was being extended.¹³⁵

In any case, the division of "great soil groups" of the contiguous United States into the two large categories of humid and subhumid (to arid), actually approximates the 96th meridian, insofar as it can be said to approximate any meridian at all.¹³⁶ Thus, it was natural to extend thinking about the more arid regions of America sufficiently eastward to ensure inclusion of the area of the Cheyenne and Arapaho Reservation. In this light, it becomes clear why the Interior Department tolerated the grazing contracts made in the names of the Cheyenne and Arapaho tribes that I referred to in the Introduction, in the years 1882-1885, despite the clear awareness of the Department that these leases were illegal.¹³⁷

In general, however, the Interior Department was sceptical of leasing and reservation policies in the last quarter of the 19th century. It vehemently urged, as early as 1875, that public sale of

western grazing lands was the proper alternative to leasing of government reservations of all sorts.¹³⁸ Even when the last strong stand for mass sale of western grazing lands was made in 1947, the U. S. Legislators from the western states who urged this policy saw the Agriculture Department's Forest Service as inimical to their interests, and attempted to force a transfer of forestry service responsibilities to the Grazing Division of the Interior Department, which they conceived to be more amenable to the interests of cattlemen.¹³⁹

Especially between the years from 1909 to World War II, the Forest Service constantly, and sometimes the top officials of the Agriculture Department as a whole, kept up a constant stream of propaganda against the Interior Department. Elements of the Agriculture Department contended that the Interior Department had no competence to effect conservation measures in any area or aspect of the public domain. Sometimes the argument was that the regulatory functions of the General Land Office had totally been captured or easily manipulated by western cattlemen and land speculators.¹⁴⁰

This was surely a grievous overstatement of the circumstances. It is true, however, that the Interior Department had no trained foresters before 1908, and, with reference to Indian reservation forest lands, had to consult with Agriculture Department personnel on technical questions. This resulted in a formal agreement between the two departments in 1908, under which Forest Service personnel carried out fieldwork and were payed by the Indian Office.

These Agriculture Department experts, however, found the clerical practices of Indian Affairs fieldworkers, with respect to routine

forestry work, to be unfortunately conceived. Therefore, there was an attempt to transfer experienced clerical help from the Forest Service to the Indian Office, but the Comptroller-General ruled this step illegal. The opportunity was then taken by a new Interior Secretary in 1909 to abrogate all agreements and end all aspects of cooperation between the two departments.¹⁴¹

Such events must raise at least a few more general questions about the capabilities of the Interior Department in general, and the BIA in particular to extend, competently, land resource management services to Indians engaged in agricultural development. In 1916, in a letter to the Chief of the Agriculture Department's Office of Extension Work, the Commissioner of Indian Affairs stated his objections to direct dealings between county agents and Indian Affairs district farmers. The Commissioner argued that the policy of county agent work was to visit periodically "certain progressive farmers in each locality...for the purpose of demonstrating proper methods...for the benefit of all farmers in that vicinity, who may wish to attend." An Indian Service farmer, on the other hand, was supposed "personally to visit each Indian farmer in his district as often as conditions will permit, as the majority of the Indians are not yet far enough advanced to justify the general adoption throughout the Service of the selective demonstration plan under which your agents work."¹⁴²

This "selective demonstration plan," in fact, was a function of insufficient funding of the Office of Extension Work before World War I. As a result of the war drive for greater agricultural production, the extension of the network of county agents became the Agriculture

Department's main theme. Thus, an effective line of communication between the federal government and small farmers was secured, and attention to the variety of problems confronting individual farmers became more adequate. Meanwhile, the response of the Interior Department to the war drive was to use it as an excuse to sell land in larger acreages, and open more public lands to private ownership.¹⁴³

That the Commissioner in his 1916 letter may have misconstrued the Agriculture Department's basic orientation is further evidenced by a 1913 BIA request to the Agriculture Department's Office of Farm Management of the Bureau of Plant Industry. The request was accompanied by copies of BIA school farm reports. The form of reply to such requests is exemplified by a letter to Cantonment Agent Walter G. West by Levi Chobuck, Bureau of Plant Industry Agriculturist. Chobuck tried to explain that the Office of Farm Management attempted to give attention to the problems of commercial management of individual farms as units with different needs and potentials, that had to be considered holistically, unit by unit. Chobuck further emphasized that there was no abstract demonstrative purpose to the workings of that Office.¹⁴⁴ Thus, the Commissioner's focus on county agents showed at least a lack of adequate comprehension of the range of services provided by the Agriculture Department--if indeed the Commissioner's attitude were really anything other than a fit of petty bureaucratic jealousy and resentment.

In any case, both the philosophy and facts of supposed Indian Service farmers' detailed attention to individual farming problems of Indians may be called into question, at least with respect to the

situation of the Southern Cheyennes and Arapahoes. In fact, there were often complaints by BIA special investigators that Cheyenne and Arapaho district farmers were being used by the agents primarily as leasing clerks, rather than as active field workers.¹⁴⁵

With regard to the philosophy, one must ask why the Indian Affairs high officials permitted, and sometimes even encouraged, its agents and farmers to devote much time to promoting Indian Fairs for demonstration purposes.¹⁴⁶ Why were lecture forums established for presentations by the more erudite district farmers?¹⁴⁷ Why was money squandered on almost any new fad in agricultural machinery even though the machinery could still be regarded as in the experimental stage?¹⁴⁸ Why were experiments with breeding native wild grasses indulged?¹⁴⁹ Why were faddish plants from foreign climes introduced?¹⁵⁰ Why were demonstration farms elaborately introduced?¹⁵¹

One of the strangest manifestations of this predilection for experiment and for very "selective" demonstration activities, despite the supposed official BIA policy, concerned a period of intense interest in promoting the "Campbell Culture System" for Great Plains farming. Interest in this system was manifested by many other agencies besides the Cheyenne and Arapaho Agencies.¹⁵²

Important components of this "culture system," supposedly designed to maximize soil retention of rainfall moisture, were deep furrowing and wide spacing of furrows. The subsoil was to be packed by rollers, and the surface soil harrowed year-round to spread coarse mulch. The system, however unintentionally, was ingeniously designed to completely destroy any soil structure. The constant harrowing of the surface soil

was an especially nice touch, since it ensured horrendous blowing of the topsoil in the summers. In all, the Campbell system was a fine example of how concentration on only one aspect of an ecosystem, even the very important one of soil retention of rainfall moisture in semi-arid regions, can be thoroughly ruinous of man's primary economic activities.¹⁵³

In the ecosystem in which Cheyenne and Arapaho Indians had to farm in Oklahoma, production of enzymes by micro-organisms that lead to the decomposition of organic materials into elements that can easily be utilized by more productive plants in secondary succession, is as important as in any other ecosystem. The peculiar characteristics of central-western Oklahoma ecological dynamics, however, ensure very long periods of unproductive secondary successional floral dominants that provide basal area covers of less than 1 percent. These periods are shorter if there is proper underground incorporation of the residues of the remnant weed species, or sorghum crop remnants that take hold on vacant fields for the brief first stage of succession.¹⁵⁴ This is why the type of tillage practiced on fields just prior to abandonment is more determinative of the types of weed species that invade a field soon after its abandonment, than are variations in soil type.¹⁵⁵

A system of cultivation that packs the subsoil, therefore, could hardly be a good system for an area with these ecological dynamics and a high rate of field abandonment, since natural infiltration of the subsoil by matter from early pioneer species is decreased. It was an unhappy circumstance, then, that elements of the Campbell system entered into the folklore of Cheyenne and Arapaho Agriculture. Some years after

the fad passed, certain aspects continued to have a hold on Indian practices. The planting of seed by lister drilling after closely set furrowing of the surface through discing, a good conservation measure deplored by Campbell System enthusiasts as "lazy man's" farming, was slow in diffusion amongst the Indians. They tended instead to pack the seed into the ground after plowing deep and wide furrows, though plows and not rollers were used to force the seeds deep.¹⁵⁶

To all the ill-advised experimentation and demonstration, the Indian Office only offered mild caveats, as did Assistant Commissioner E. B. Meritt in a letter in 1914, with regard to the plans of Calumet District Farmer E. M. Tardy to set up a separate demonstration farm in his own district. Meritt, however, gave full approval to the ancillary plan to set up "demonstration clubs" among the Indians.¹⁵⁷ Meritt, further, sent a circular to all superintendents in 1915, urging the establishment of clubs for "social and intellectual or industrial improvement" among students returning from off-Reservation schools.¹⁵⁸

On the whole, the BIA continued to profess the philosophy of direct and detailed personal attention to particular farming problems of individuals. It was decided, however, that a more long-term approach was needed, in 1922. Thus each allotted Indian was required to develop, in consultation with his district farmer, a "Five-year Plan" for his personal farm management. An integral part of this system was to be a fostering of the spirit of competition between Indians in farming, through development of a system of moral incentives.¹⁵⁹

By 1925, however, the Commissioner of Indian Affairs admitted that these individualistic manifestoes were not improving the general

situation markedly. Thus, it was decided that the Indians would be organized by district farmers into "Farm Chapters." The spirit of competition was still to be an integral part, but on a new "team" basis.¹⁶⁰

The kind of competition actually arising from these "chapters" turned out to be a great many internal feuds among various kinds of factions. Eventually, then, the emphasis on team competition, along with the employment of moral incentives, was quietly phased out in favor of an emphasis on the benefits of internal cooperation in obtaining cash benefits from cooperative finance and marketing.¹⁶¹

In short, I find it hard to see anything in the BIA philosophy of detailed attention to particular problems, except a lack of coherent understanding of how to promote agricultural development. The reason that this was critical to Indian land tenure evolution, was that the BIA high officials, agents, and farmers came to have control of the Indian as property owner within their discretionary powers. Since the Indian had been conferred citizenship by his acceptance of allotment before 1906, all that should have been required of him to be "competent" and, therefore, fit to receive fee patent to his allotment, was adulthood and sanity. Given the actual situation of such tribes as the Cheyenne and Arapaho, conditions of literacy and a basic appreciation by an Indian as to legal rights as a citizen were natural extensions of the stipulation of mental competence. How the recommendations of BIA officials came to be based on their best judgments as to how successful the Indian allottee would be as a farmer, rather than on the legal condition of mental competence, is an odd story that must be told.

The "Burke Act" of May 1906 was an Amendment to the General Allotment Act that extended the discretionary powers of the Interior Secretary and his delegates to the granting of fee simple in advance of original trust period expiration, whether the Indian liked it or not.¹⁶² The constructions of procedures based upon this Act, by Commissioners Larrabee and Leupp, in the years immediately following its enactment, were much fairer to the Indians than the letter of the law. I shall discuss this much further, shortly.

In the Cheyenne and Arapaho case, more fee patents were issued under Burke Act provisions, in the years 1907-1916, than after Competency Board Recommendations, in the years 1917-1926. In Cantonment Agency, 79 fee patents issued from 1907 through 1916, while 52 issued from 1917 through 1926. The comparable figures for Concho Agency were 170 pre-Competency-Board issues, to 156 issues thereafter, through 1926.¹⁶³ This meant that only 21.6 percent of Concho Allottees, and 15.1 percent of Cantonment Allottees had received patents before the end of the 10-year general extension of the original trust period in 1927.¹⁶⁴

The attitude at Seger Agency (including the Red Moon area) was more adverse to fee patent issue than it was at Concho and Cantonment. Thus, two years after the Burke Act, a Seger Agent positively bragged that he'd allowed only one patent to slip through.¹⁶⁵ By 1923, only 47 patents had been issued in Seger Agency through Indian application under Burke Act and similar provisions, and 26 by Competency Board recommendations--2 patents having been issued in 1922.¹⁶⁶ By 1925, the figures were exactly the same; fee issue having effectively ceased. The question, then, arises why so few allottees were ever judged "competent"

by the BIA.

Accompanying early explanations to Agents of provisions of the Burke Act of 1906, was a detailed but concise form to be filled out, by the Indians, as an application. Thus, the "like it or not" aspect of fee issue was not emphasized.¹⁶⁸ Further, the application was to be filled out by the Indians, to attest to the Indians' literacy. Agents were to file reports evaluating each item on the application, and then offering recommendations and reasons for recommendations.¹⁶⁹

After much correspondence, embodying many expressions of frustration, Acting Commissioners began routinely to send back applications. This was because the agents' reports and explanations of recommendations, were usually fragmentary, incoherent, vacuous, or non-existent.¹⁷⁰ In the period from 1906 to 1909, Commissioners Larrabee and Leupp struggled to understand the recommendations of the Cheyenne and Arapaho Agents.

Some of the instances were quite amazing. Concho Agent Shell generally recommended against fee patent issue. In one case he did this on the stated grounds that the applicant showed "unmistakable signs" of "commercial turpitude." This seemed to consist solely in the applicant's stated intention to sell his allotted land and use the proceeds to speculate in town lots. Larrabee, therefore, wrote back that the Agent should make a charge in law against the Indian if he was behaving fraudulently in business dealings. However, an individual successfully engaged in unscrupulous business dealings, far from being incompetent, was perhaps overly competent to handle his own affairs.¹⁷¹

In another case, Shell wanted to deny the Indian, though admittedly well-educated, industrious, and sober, a fee patent because the Indian had considerable debts. Larrabee wrote back that most people, especially farmers, had considerable debts, and that, if Shell's criterion could be applied generally, many white farmers in Shell's area would forthwith be deemed incompetent. I will quote from Larrabee's letter, since it is a rare example of correct legal thinking among BIA officials:

It is perhaps proper to say to you that the Office in attempting to administer the law relating to the issuance of trust patents does not understand that an allottee must be of such a character that success seems assured should he have his lands freed from restrictions, but all that is required is that he have the mental capacity to look after his own affairs.¹⁷²

There was also an undercurrent of contempt, based on racial prejudice, by BIA field personnel for their Indian charges. For instance, Commissioner F. E. Leupp seemed outraged by a recommendation from Shell to issue a fee-patent to an Indian allotment to a man whom Shell indicated to be an ignorant, vagrant wastrel. Shell argued that this person should receive the patent anyway, because he was a white man. Leupp suggested that the man's half-Indian children might some day have a use for the property, and denied the application.¹⁷³ In another instance, Shell's main argument against fee-patent issue came down, after many earlier of his reasons had failed to impress the Indian Office, to the statement that the allottee "has recently been seen frequenting the negro portion of El Reno where disreputable gamblers live and no respectable white man or Indian has any business hanging

around."¹⁷⁴

The argument that the Cheyenne and Arapaho Agents considered to be most telling in their recommendations was that the Indians wanted patents so that they could sell their allotments. Thus, Cantonment Agent Byron White wrote a peculiar letter in late 1908, to accompany a list of applicants favorably recommended as to their grasp of English, and their general intelligence and industriousness. The covering letter stated that almost all applicants sought the advice of attorneys after they had submitted their applications but before they received patents. These attorneys, White contended, then began to negotiate loans for the Indians on the security of the Indians' anticipated equity in their allotments. Meanwhile the attorneys corresponded with Washington attorneys who checked upon the status of the applications, and, upon learning of favorable recommendations, sent receipts for the patents back to Oklahoma so that negotiations could be rendered final.¹⁷⁵

One set of relevant facts omitted from White's letter was that the Indians often resorted to lawyers because the agents and district farmers did not bother to keep the Indians informed concerning the status of their applications. The processing of these applications, furthermore, always took several months, and sometimes extended over several years.¹⁷⁶

Indian Commissioners after Larrabee and Leupp, however, tended to accept the field agents' viewpoint. The Indians were encouraged to sell inherited lands, or only half their allotments, through the Indian Office under provisions of the 1907 "Non-Competent" Indian Land Conveyances Act. If the Indians resided on the allotment of a spouse,

rather than their own, they were encouraged to let the BIA sell the unoccupied allotment. Such sales were good, while Indian-handled sales were bad, as the BIA saw it, because proceeds from such sales remained under the complete control of the BIA and could be restricted in use to improving the lands remaining to the allottee or the spouse of the allottee, or in the purchase of necessary stock and machinery, and not in frivolous domestic purchases. Actually, these sale funds were not completely under BIA control until 1910, but the Indians applying for fee issue in 1909, were being told that the BIA would take a "wait and see" attitude toward approving applications, with the primary condition being whether the Indians invested their sale moneys on their allotments of application.¹⁷⁷

One fact ignored by the BIA in this trend of policy is that, where collusion in fraudulent land transactions abounds within a region, it might be that bids on land in public auction would be held artificially low. Some evidence of fraudulent conspiracy with respect to transactions in Indian lands had been brought before a Grand Jury in December of 1908, though it was thin evidence and the Grand Jury tended to think that BIA administrative features should be the area in which such fraud could be most efficaciously controlled.¹⁷⁸

One thing that is certain is that some Indians felt themselves to be driven to undertaking private contracts with land speculators, in anticipation of fee simple issue, because public sales of "non-competent" lands were tending to produce sales figures much less, sometimes by nearly a half, than prices land speculators were willing to pay. Sometimes such contracts were made and then prices actually

presented by the Indians to BIA officials, primarily to prove that the agents were undervaluing Indian lands or just letting them go cheap in auction.¹⁷⁹

The recommendations of the Cheyenne and Arapaho Competency Board in 1917 provided no relief from these circumstances. The Seger Agent was informed by the Custer County Clerk on September 7th of that year that photographic copies instead of actual fee patents were being received directly by the County Clerk's office along with deeds of sale, from Watonga Judge Ed Baker.¹⁸⁰ On September 20th, Baker admitted receiving information on favorable recommendations from BIA officials before any official announcements or actual patent issues.¹⁸¹ By September 28, distribution was halted of actual fee patents being received by Cheyenne and Arapaho Agencies from Washington.¹⁸²

Baker does not seem to have understood the meaning of the general extension of the original trust period by Presidential Order in January of 1917. He seems to have thought he could be blatant in his actions and admissions because of the presumed expiration of much of the federal government's authority at the end of the original trust period. He was soon enlightened on this point.¹⁸³

The conviction of Baker for fraud hardly ended land speculation in northwestern Oklahoma. It did lend support to the agitation by agents against fee patent issue. For instance, a Seger Agent in 1921 pointed to the fact that many of the Indians who did receive patents through Competency Board recommendations, immediately sold the land "at ridiculously low prices."¹⁸⁴ The agent neglected to remind the Board of Indian Commissioners that a predecessor of his, Jesse Smith, reported in

1918 that, because of the unsystematic character of BIA appraisements in previous years, the Indians' lands had been undervalued by the Agency to the extent that the 1918 values had to be reset, in all cases, at least 30 percent higher than in 1917. In many cases, appraised values were reset as much as 500 percent higher with little complaint being evoked from lessees and land purchasers.¹⁸⁵

The real cause of agents' prejudice against fee simple issue seems to have resided less in the manner in which fee-patentees conducted their business affairs than in the fact that fee simple issue did not effectively remove the allottees from all government wardship responsibilities. Several agents expressed themselves quite plainly on this point.¹⁸⁶ These agents urged that either the policy of accepting applications for fee issue should be terminated, or else fee-patentees should somehow be forced to relinquish their wardship status along with their trust patents. These agents, of course, were exemplifying ignorance of, or contempt for, constitutional law. Their complaints, however, point to a truth that neither the BIA, nor most friends of the Indians, perhaps, would like to admit. This is the fact that the Indians would have been wards of the government, and within their rights to demand services and protection from the federal government, even had actual patents in fee been transferred to the Indians at the time of allotment. The trust authority, therefore, was not essential to Indian protection, and often acted as a barrier of bureaucratic forms between the Indians and their legal rights of federal wardship.

6. Recapitulation

This chapter has dealt with the legal situation of the evolution of Cheyenne and Arapaho agrarian settlement in Oklahoma. It has attempted to show, first, that it was not surprising to see Indian reservations terminating in allotment in severalty and sale of surplus lands by contract with the federal government. This was the fate of the public domain in the 19th century. The ending of allotment policies by the Interior Department in the 20th century no doubt represented, to some extent, genuine sentiments of regret at the effects of allotment upon the Indian. Sentiments, however, have never been decisively demonstrated to have any causal moment in history. Opening of Indian reservations came to an end in the 20th century, because the public domain was effectively closed in its entirety in the 20th century. Both the openings, and the closing, were functions of federal treatment of its nationalized lands as a revenue-bearing asset.

Both the reservation and allotment policies can be understood to represent an underlying unitary policy trend, continued from the European trend of enclosure and allotment. The economic implications of the two policies, however, were completely dissimilar. Reservation led to agricultural progress, allotment to agricultural decline. Various reasons have been offered for this in economic terms. Primarily, decline resulted because the dispersive and isolating character of allotment in severalty retarded diffusion of agricultural innovations. This is almost tautologous, but the reasoning seems to have not occurred to those advocating allotment policies. Why they thought agricultural innovations would spread from person to person faster if the persons

were spatially isolated from one another, is a difficult matter to explain in common sense.

In a broader sense, allotment damaged agricultural progress simply by making the land base less flexible. The cumbersome process of allotment exchange could not solve the problem. Further, the prevention, by the federal trust, of the use of the land mortgage, led to reliance upon the chattel mortgage instrument to an excessive degree. A high rate of interest, a short term of maturation, and the absence of the equity of redemption, all distinguish the chattel mortgage from the real estate mortgage. Thus, even had the merchants and financiers and farmers in northwestern Oklahoma who offered the chattel mortgage to the Indians been honest, and not routinely demanding that the liens be over-secured, it would have been likely that foreclosure rates on Indian mortgages would have been high. Deprived of the means of working their lands, the Indians had to abandon fields too frequently to ensure that a lessee could be found immediately to keep the fields in production with little lapse of time. Hence, fields were left to erode.

Northwestern Oklahoma was not the center of world financial and industrial powers. Exploiters abounded, but few were of Robber Baron vintage. When suits in replevin, or mandatory injunctions, or suits for damages, concerning trust property, were most successful, they commonly resulted in little financial help to the Indian. Their principal result was the persecution of an "exploiter" who was in many cases a desperate little person trying to get bare survival in an uncertain world.

Finally, it should be made clear that fee simple issues were not really related to the "competency," in the strict legal sense of the

word, of Indians. In fact, few original allottees received fee patents under any circumstances. This was a function of BIA unwillingness to give Indians large measures of discretion as long as the Indians could still make demands upon the BIA for protections and services, under the terms of wardship.

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Chapter III

THE GEOGRAPHY OF RESERVATION SEDENTARY

TRENDS, BEFORE ALLOTMENT

The second misconception is the assumption that to explain the functional aspects of groups, one must look for group functions.... Suppose a visitor from Mars, unseen, observed the social behavior of a mob of panic-stricken people rushing from a burning theatre. If he was burdened with the misconception in question, he would assume that the mob must show some sort of an adaptive organization for the benefit of the group as a whole...He would be impressed by the fact that the group showed a rapid "response" to the stimulus of fire. It went rapidly from a widely dispersed distribution to the formation of dense aggregations that very effectively sealed off the exists.

--George Williams, Adaptation and Natural Selection¹

1. Chapter Rationale and Overview

After discussing the de jure aspects of the reservation, we need to analyze the de facto reservation status of the Cheyennes in Oklahoma. First, an explanation must be offered about the events which led the Cheyennes to occupy areas of the North Canadian, South Canadian, and Upper Washita river watersheds. The geopolitical (trade route and military-strategic) aspects of life on the plains will be sketched.

The second section considers aspects of the ecology of northwestern Oklahoma. It tries to explain how the Indians tried to demarcate the area of their sedentary evolution, and the impediments introduced by BIA insensitivity to environmental realities. Then follows a third section

on the epidemiology of Cheyenne malaria. It demonstrates that there were environmental determinants of Cheyenne sedentary trends, and not merely BIA arbitrary preferences for the sedentary life for their Indian charges, in the interest of administrative convenience.

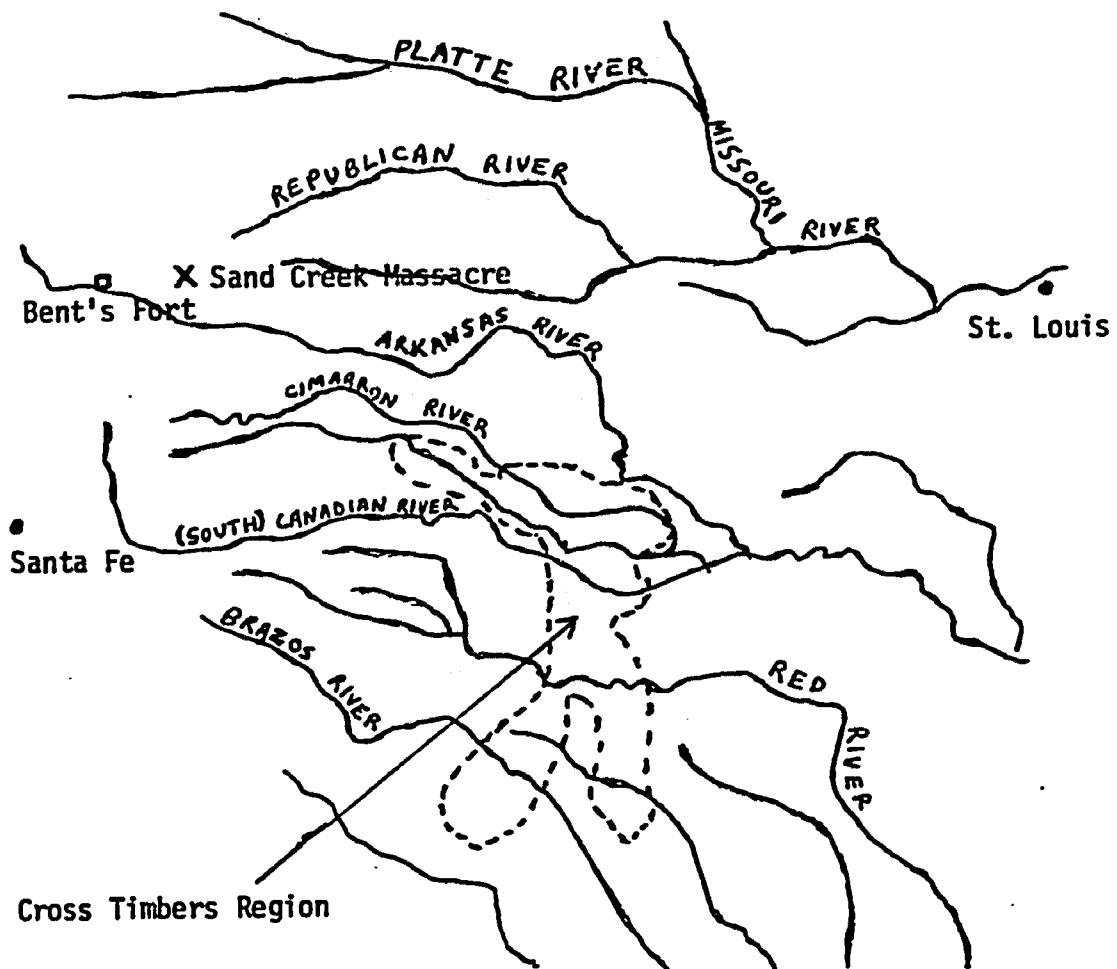
The fourth section concerns the confusion generated by the toleration of grazing on the reservation by white cattle corporations, which was a serious indiscretion committed by the Department of the Interior in the time period 1878-1885. I take as my starting point in this section an essay by E. E. Dale, which was a defense of cattle corporations, and an accusation that the Indians, in rejecting the corporations, were unfair, and the authors of much mischief for the cattle industry as a whole. Section five, then, will be the only controversial part of the chapter. Its point, however, is not the controversy, but rather what an examination of the cattle ranching episode can show in terms of the ecology of the reservation, and the industrial progress of the Indians.

Maps IV and V are intended to provide a visual frame of reference for the chapter as a whole. Map IV shows major rivers of the central and southern Great Plains of North America. Map V shows some important creeks and trails of western Oklahoma.

2. Geopolitical Perspective: Trade Routes and Military Strongholds

By the time of the earliest white explorations of the North American continent, the settlement pattern of the northern region of what was to be called "The Great Plains," was river-bound.

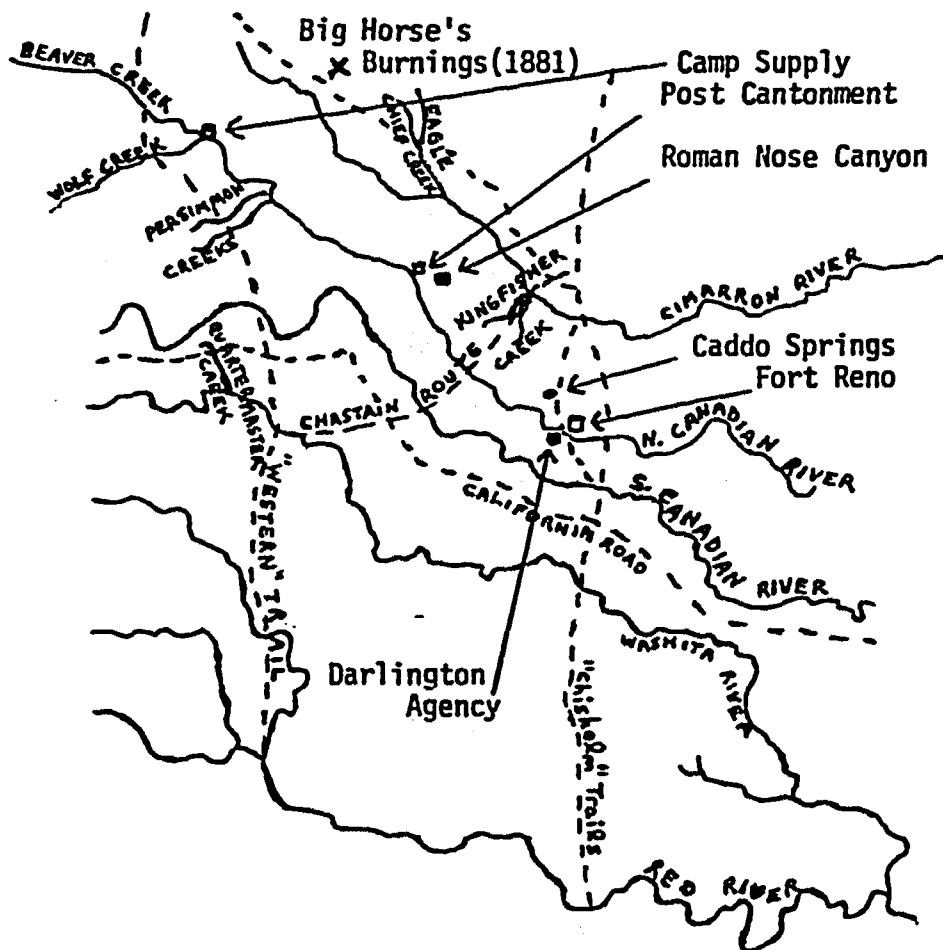
MAP IV
SOME MAJOR RIVERS OF THE CENTRAL AND SOUTHERN PLAINS



Sources: Elizabeth Ann Harper, "The Trade and Diplomacy of the Taovayas Indians of the Northern Frontier of New Spain, 1719-1835" (M.A. Thesis, University of Oklahoma, 1951); Hammond's American History Atlas (Maplewood, New Jersey: C. S. Hammond & Co., 1965), p. A-15.

MAP V

SOME RIVERS, CREEKS, AND TRAILS OF WESTERN OKLAHOMA



Sources: Morris, et.al., Historical Atlas of Oklahoma, maps 27 and 46; Melvin Harrel, "Oklahoma's Million Acre Ranch," Chronicles of Oklahoma 29(Spring 1951): map following p. 70; J. W. Chastain to Cheyenne and Arapaho Agent John Miles, 1 March 1881; Acting Commissioner of Indian Affairs, A. Blipshaw, to Captain Jesse Lee, 30 October 1885; CAA, File "Cattle, Pasture and Grazing Leases," OHSAMD.

Horticultural villages on the major rivers of the Missouri drainage were the rule even for Indian groups like the Cheyennes, who immigrated from the northeastern forest into the grasslands only shortly, speaking relatively, before major white intrusions on the continent.²

In the southern plains, only seasonally were the resources of the broad grassland areas between major river valleys extensively utilized. Horticultural groups might alternate seasons of river valley crop production with seasons of grassland plant and animal gathering. Commonly, however, semi-nomadic groups would exploit plains resources in season, then return to the villages of related full-time horticulturalists, especially in the severest winter months. The less mobile groups valued buffalo hides and pemmican, and also the bones of the bison, which were used to make tools. Thus, a pattern of semi-nomadic/settled-horticultural symbiosis of the two types of plains groups developed anciently.³

The Spanish colonies in New Mexico were not originally established out of any strong demand in Spain or New Spain for North American Indian products. The main intention, rather, was to secure the northern mining frontier of New Spain from the raids by Indian "nations of the north," and to counter the advance of the mercantilists of the French and British Empires toward New Spain, through the trade avenues of North America.⁴ Trade with the Indians did develop, however.

Metal, desired by the Indians to improve weaponry, and horses, to promote mobility over the grasslands and deserts, were traded by New Mexican colonists for Indian slaves taken by the Apaches, initially, from more eastern plains tribes, as well as for buffalo hides and

pemmican. What could not be obtained in trade was seized in raids.⁵ During the 1700s, other Indian groups, like the Kiowas of the southern plains, and the Comanches of the Rocky Mountain basin-plateau area, came into the area, attracted by the horses and the metal. Of non-Indian groups in the 1700s, French mercantilists were most attracted by the possibilities of the New Mexican market.⁶

The French viewed New Mexico as an essential intermediate market area, in their efforts to tap the economic demand of the colony of New Spain. Their efforts to colonize Texas had been countered by the Spanish in the late 1600s. Though trade with the Indians flourished in the north and east of North America, French desire for southern plains goods was slight. Buffalo robes were too bulky and of too little unit value in this period to be of interest to Europeans.⁷ The pelts of such small mammals as beavers, martens, and lynxes were in greater demand, and the eastern forest and the valleys of the Rockies supplied those furs.⁸

In the early 1700s, French efforts to reach the New Mexican trade were blocked by the Spanish authorities. The Spaniards conceived the French and Indians to be natural allies on the basis of the fur trade, the French supplying the Indians with guns. Further, in 1720 war between Spain and France was developing in Europe. Finally, Spanish governors were jealous of their monopolies of trade with the garrisons of the northern frontiers of New Spain.⁹

The French, therefore, promoted an alliance of plains tribes, principally the Comanches, in direct contact with the Spanish, and the Wichitas, easily and directly contacted by the French. The Wichitas

were largely a sedentary horticultural people, with villages in the Cross Timbers areas of Oklahoma and Texas, and, at the time of white contact, Kansas. Their role in the 1700s as middlemen between the French and the southwestern plains tribes gave new meaning to the old plains pattern of village-nomad symbiosis. Their geopolitical position first disclosed the characteristics of the cross timbers region, and the rivers flowing into it, as a communications nexus and military stronghold.¹⁰ The Washita and the North Canadian rivers were military highways. The sand flats of the South Canadian River were features of ambush; the sand dunes, covers for gunmen. The breaks of the Cimarron River valley were escape routes after forays and feints. The cuernas running north-south between river valleys covered troop movements.

The Spanish in 1759, first learned of the military meaning of the area on the Red River. There the Wichitas had taken advantage of features of the terrain, building stockades and moats to secure their village and roads, leaving the Spanish exposed on the sand flats.¹¹ When the Cheyennes came south to attempt to wrest part of the horse trade from the southwestern plains tribes, they encountered the defensive advantages of the more northerly river systems.

The largest expedition of the Cheyennes against the Kiowa and Comanches sought out, in 1838, the camp of elements of these tribes on Wolf Creek. The Kiowas used rifle pits in the creek-bed sand to break up and isolate Cheyenne groups, and the Cheyennes had to retreat to the North Canadian River.¹² Lessons were learned in this painful fashion.

In 1868 the Cheyennes were singled out by the U. S. Army for punishment for Indian harrassment of wagon trains moving on the Santa Fe

Trail, which followed the route of the Arkansas River west over the central plains. The Indians feinted at the troops on the Cimarron River, and escaped deftly through the river valley breaks. They returned for forays through the breaks, and harried emerging Army columns from amongst sand hills and gypsum hills formations. They fell back, then, briefly to the high ground above Beaver Creek, forcing the Army troops to dismount. Finally, they slipped away to the South Canadian sand hills, where the troops again had to dismount and make torturous progress through the hilly maze before risking exposure on the sand flats of the river bottom.¹³

The Cheyennes, in the late 1700s, were still a horticultural group in the northwestern plains, around the Black Hills. This could have put the Cheyennes in a position of some advantage in the northern plains region, because, at the time, a great many horses coming into the region were not being moved through the grasslands. Rather, they were passed up the Rockies, on the plains western margin, from valley to valley amongst Indian tribes, through trading and raiding. The Cheyennes, however, were firmly committed village horticulturalists, and hesitant to greatly value the means of nomadic adaptation.¹⁴

The greatest economic disadvantage of their northwestern marginal position concerned the northern and eastern location of white fur trading establishments. Tribes of the Missouri River, and those ranging the margins of the northern (Canadian) forest, were jealous monopolists of the European trade. They prevented the Europeans from establishing forts in the Rockies. It was not until, in the trader David Thompson's words, "Lewis and Clark obliged the British by murdering some Blackfeet,

drawing the Peagans of that alliance toward the Missouri for revenge," that Thompson could slip supplies across the Rockies and set up his trading fort.¹⁵ Thus, in the late 1700s, Cheyenne attempts to attract direct contact with European traders, through advertisement of much beaver for low prices, failed completely.¹⁶

The resources of the grasslands themselves, however, were becoming in the late 1700s of greater importance to the European traders. Even in the early 1700s, pressures of the Sioux Indians, moving into the prairies from the east, probing at the underbelly of the Canadian forests, was a cause of concern to the French traders of the northern forest and their Indian allies. French and Indian forts, therefore, began to be built on the Missouri, and the confidence of Missouri River tribes, like the Mandan, who were hostile to the Sioux, was cultivated through token trade.¹⁷

In 1763, the British had taken over the Canadian forests from the French by war and treaty. They sought to establish a communications network to promote the stability of their operations, throughout the plains east of the Missouri. Therefore, they cultivated the Sioux, and also the Arikara of the Missouri River valley, whom the Sioux dominated.¹⁸

As the game of the northern and northeastern forest bordering the plains margins was depleted to provision the fur posts, the British began to desire greater trade with the Missouri River Valley peoples. Bison hunters among the Indians became valuable trade partners.¹⁹ The horticultural products of the plains riverine peoples also came into demand among the traders as they worked their way along the Missouri

River.²⁰

Increased demand for buffalo products stimulated greater competition for grassland territory among Indian groups. The buffalo ranged extensively, in variegated patterns and often in small groups. In order to ensure good access to large numbers of buffaloes at any given time, a great body of grassland territory had to be secured.²¹ In this competition for territory, horses were valuable, for mobility, so that the route of horses up the Rockies from the southwest was important to contact. Guns, however, were as useful in warfare as they were in increasing buffalo slaughter, and guns came into the hands of those tribes to the north and east of the Missouri, who were in direct contact with the white trade.

Given these incentives and constraints, by 1795, the Cheyennes were beginning to de-emphasize their horticultural activities, and the concomitant sedentariness of residence. They sought to insert themselves as middlemen between the Missouri tribes and the tribes of the Rocky Mountain margin of the Plains. Horses and beaver pelts were obtained from tribes on the west, and exchanged for Arikara horticultural products for subsistence, and for guns from the whites that could be brought in trade to the Rocky Mountain tribes.²² The horse, naturally, facilitated the mobility necessary to the middleman economic niche, and the horse-and-gun complex promoted more extensive Cheyenne hunting of the buffalo. As familiarity with the plains grassland environment increased, its vegetable products came into use by the Cheyennes, especially the prairie turnip, the flour from which was traded for Arikara corn.²³

The middleman's niche, in various parts of the northern plains, was one for which many Indian groups competed. The European traders, however, as noted previously, were eager to bridge the geographical gaps themselves. By the second decade of the 1800s, the transport network of the northwestern plains had been developed sufficiently to add the further incentive of a profitable movement of buffalo robes to European markets. Thus, direct contacts between traders and grassland tribes in all areas of the northern plains began to develop.²⁴

Meanwhile, new niches for middlemen were opening up in the southern plains. By the 1820s, the entrepreneurs of the United States had taken over the French effort to bridge the trade gap of the southern plains to Santa Fe, New Mexico, and thence to California. The Spanish-Mexicans had been successful in cutting the French route along the Red River. Thus, the Arkansas River valley and adjacent areas were used as a highway from St. Louis into Colorado. The development of this traffic led to a demand for traction horses, which was served by southern plains tribes like the Comanches, still raiding and trading for New Mexican and Mexican horses. Traders from the northern plains, like the Bent family, related by marriage to the Cheyennes, established, in the 1830s, forts on the Arkansas River in Colorado, to move horses east, and to provision and supply horses to wagon trains of settlers and merchandise moving west.²⁵

As Berthrong has demonstrated, the common inference that the establishment of Bent's trading fort coincided neatly with, or even caused, the first movements of large groups of the Cheyennes to settle in the southern plains, cannot be correct. Cheyenne groups were

settling on the Arkansas in Colorado as early as the 1820s.²⁶ It is commonly allowed, however, that the early role of the Cheyennes, in the southern and central plains was, again, a middleman's role. They raided, or traded with, the southwestern plains tribes for horses, and used the Bent establishment as they had earlier used Arikara villages, continuing the long-standing plains mode of symbiosis with settled economies.²⁷ Thus, though the movements of the Bents to the south did not cause the Cheyenne movement to the south, yet the Bent establishment helped to stabilize the Cheyenne settlement of the region.

The buffalo remained a resource of vital subsistence and commercial importance. A treaty of 1840 with the southern plains tribes, however, restricted the Cheyennes to a buffalo range largely north of the Arkansas river. The advance of white settlement in this region, coupled with the depredations of regional game by hunters to provision wagon trains on the Santa Fe trail, began to make buffalo scarce. Northern Cheyennes preferred to go farther north, to the country near the Platte River forks.²⁸ By 1849-1850, cholera was prevalent in the Arkansas River area.²⁹

The importance of the Cimarron and Canadian River systems, meanwhile, was being reinforced. As early as 1823, the route of the Santa Fe Trail along the Arkansas River to Colorado was short-circuited more directly to Santa Fe by the establishment of a Cimarron River/Beaver Creek cut-off which passed through the Oklahoma panhandle.³⁰ After the news of California goldmining opportunities became widely disseminated in 1849, the California Road was surveyed and traveled, which follows the South Canadian River from Fort Smith, Arkansas to

Santa Fe.³¹

Stop-and-go war between whites and Indians made the central plains a set of battlegrounds, and many weary Cheyennes began seeking a haven of refuge. No leader strove more than Black Kettle to locate a village site outside of war zones. His pacifism, however, never satisfied the whites. Colorado militia massacred his people in their village on the Arkansas in 1864 (the "Sand Creek Massacre").³² By the late 1860s, he was moving his settlement widely and often, between the Red River and the Cimarron, trying to stay out of wars.³³

By 1868, Black Kettle and his camp, including the families of Clown, Bear Tongue, Scabby Man, and Half Leg, were camped on the Upper Washita River. Next to his camp was an Arapaho group, then the camp of the Cheyenne Old Whirlwind, and a group of Kiowas.³⁴ Farther downstream was Red Moon's camp. Red Moon was never a pacifist in the fashion of Black Kettle, but he had been impressed by the small-pox of Colorado, six years after the founding of Bent's Fort. The great cholera epidemic ten years later discouraged him from thinking of the area to the north and west as a refuge. The relative healthiness of the Washita region seems to have been a considerable incentive for settlement.³⁵

The Indian Office component of the military had led Black Kettle to believe that the Washita was by far the most peaceful environment to be selected for residence in 1868. Fighting men, however, like Custer, of the War Department had nothing but contempt for the peace administrators of the Department of the Missouri. On the face of it, the situation of the Upper Washita was the most peaceful, as well as the most sanitary. The river flowed fairly continuously, and wells dug by the military up

and down the Washita yielded water free of salt. This contrasted with other rivers in the region, which ran in spates, and with other areas of wells and springs, which were saline and laden with nitrates and organic matter (except along the upper North Canadian). The California Road diverged farthest south from the Canadian in the Area of the Upper Washita, and that road had been followed greatly in the 1350s because of the greater incidence of Cholera to the north.³⁶ By 1868 there was little traffic in the area by whites to cause friction with the Indians.³⁷

The violent, anti-Indian faction of the Department of the Missouri, however, looked upon the peaceful camps as easy pickings in their drive for glory. The general action of late 1868 was intended to take advantage of the exposed positions of the Indian camps, located too far west for retreat to the Cross Timbers. The Wolf Creek/Beaver Creek area was secured first, and developed into Camp Supply. The South Canadian was used as a military highway from the west. Custer used the cover of the low-lying hills of the gypsum hill formation, cuerdas running north-south, as cover to proceed to the Washita. He fell upon the peaceful camps in the night.³⁸

The cycle of violence thus initiated did not end until the conflicts of the middle 1870s. The Cross Timbers, however, were no longer an Indian military stronghold, and there was no longer any place of refuge, peaceful or otherwise, for the the Indians in the southern plains.

3. Ecological Perspective: Reservation Building

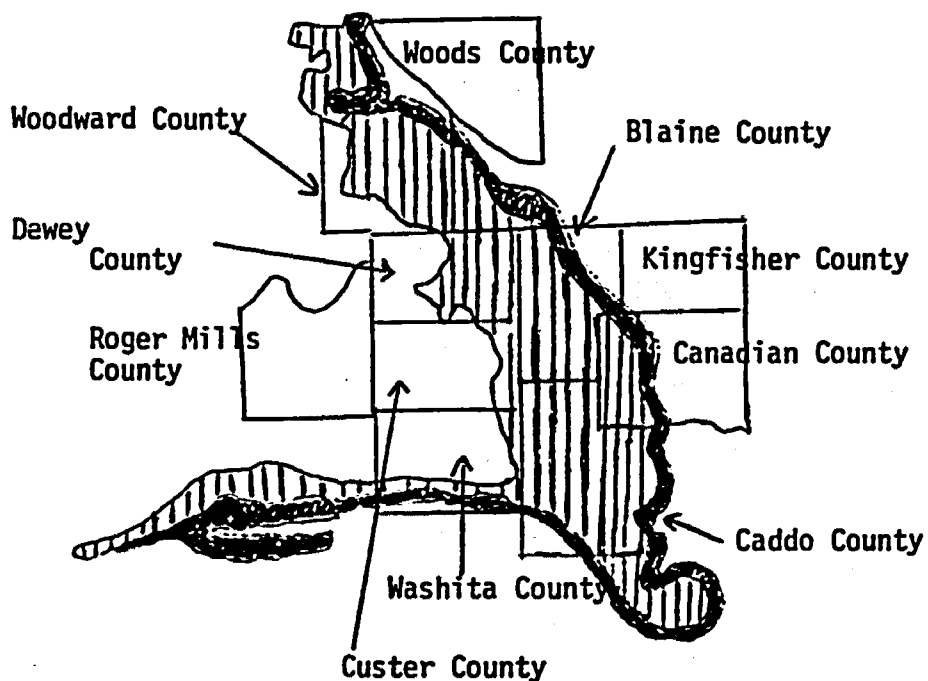
A favored habitation of the Cheyennes near the North Canadian River in the middle 1860s was a canyon about seven miles north of the current site of Watonga. It is now a state park, Roman Nose Canyon Park. It comprises about 520 acres, cutting into the Permian Red Beds of the Blaine Formation, and is stratified with gypsum that has been mined commercially since the turn of the century. Red cedar and black walnut abound, as well as the blackjack oak and cottonwoods more characteristic of the rivers and creeks of the general Cross Timbers region. Beavers, rare in the southern plains, are still found there. Prairie chickens and wild turkeys were native to the Canyon, but have long since been hunted to near extinction. The Cheyennes favored it as a winter camp in the 1860s for its good water, wood, grass for ponies, and protection from cold winds.³⁹

The canyons of west-central and northwestern Oklahoma have been an area of great interest to ecologists in this century. They are features of the basins of the Washita and Canadian rivers (see Map VI). The magnesium salts of the dolomitic strata of the region make water sources, other than the canyon-base springs, of poor quality, but the salts are concentrated in the Blaine Formation, especially in the Blaine Escarpment areas of Canadian and eastern Blaine counties (hence the problem with Darlington water). When Darlington located the agency, however, he thought the Agency area to contain much good structural stone resources, and this is indeed a quality of dolomites.⁴⁰

The largest canyons of the region are in the Whitehorse-Dog Creek Formation, a poorly cemented red sandstone of the Red Beds of the

MAP VI

BLAINE AND WHITEHORSE-DOG CREEK FORMATIONS OF
THE PERMIAN "RED BEDS" OF WESTERN OKLAHOMA,
INDICATING THE AREAS OF MAJOR CANYONS IN THE REGION



Blaine Formation



Whitehorse-Dog Creek Formation



Source: G. G. Suffel, *Dolomites of Western Oklahoma* (Norman: Oklahoma Geological Survey, Bulletin No. 48, 1930), p. 15.

Permian. They are U-shaped, from 100 to 200 feet deep, well sheltered from the strong, drying winds of the uplands. Springs along the cliff bases provide running water the year round, in contrast to the spate-running South Canadian. A dense canopy of trees reduces the incidence of sunlight, and evaporation is retarded.⁴¹

The microclimate of the canyons is much more stable throughout the year than is the general climate of the region. Moderation of wind and insolation, coupled with a relative humidity of over 97 percent throughout most of the year, are correlated with a relatively low evaporation rate that has permitted the survival of relic maple forest.⁴² In the gypsum hills region, as in Roman Nose Canyon, cedar and walnut survive. In all, the canyons provide the only really good structural timber in west-central and northwestern Oklahoma, as well as the best pasturage for horses, and, in earlier years, the best game.

Not only the canyons on the Washita and North Canadian, however, provided resources that made the areas preferred residences for Indians, including Cheyennes. Most central-plains rivers are saline, fed by springs and rivulets of the Rocky Mountain foothills. The North Canadian, originating in volcanic peaks in New Mexico, and fed by sand hill springs, provides, in its reaches west of the Blaine Escarpment, the freshest waters of central-northwestern Oklahoma, rivaled only by the Upper Washita. Wild fruit and berries abound. The Cheyennes of the Upper Washita were still, well after allotment, applying for special licenses to go the forty miles northwest of Red Moon to gather persimmons from the rivulet named after this fruit.⁴³

Long before and after allotment, the vicinity of Wolf Creek was

important to the Cheyennes. The cedars of the Canyons of the gypsum hills were more plentiful than the maples of the canyons to the southeast, serving as the chief sources of structural timber in the general area deep into the 20th century.⁴⁴ The good water of the Upper North Canadian attracted concentrations of wild game. Thus, when the settlers of Woodward County after 1893 asked Cheyennes, who traversed the country regularly to visit their Northern Cheyenne kinsmen, why the Indians usually stopped at Boiling Springs or Osage Springs, the settlers were told to observe the density of game trails leading to these watering places.⁴⁵ The military importance of this sub-region was discussed in the previous section. The Army established Camp Supply at the confluence of Beaver and Wolf Creeks only partly for reasons of strategy. The natural resources of the area were pointed out to the military by a white scout who had long been married to a Cheyenne Woman.⁴⁶ From this camp, in 1868, Captain Seth Bonney of the Army Commissary Department attempted to administer the distribution of federal annuity rations, payment to the Cheyennes and Arapahoes for land cessions under a treaty signed in October of 1867.

Under provisions of the 1867 treaty, it was assumed in Washington that the Indians would be residing between the Cimarron and Arkansas Rivers, and that is where the new agent, the Quaker Brinton Darlington, set about to locate an Agency. The absence of any Indians was a disturbing irregularity. Meanwhile, Bonney borrowed from Army rations to provide for the Indians, and began construction of storehouses, because, when the rations appropriated for the Indians arrived, they were quick to spoil. The storehouses were later moved 135 miles

downstream where the actual Darlington Agency was finally established.⁴⁷

Darlington himself finally arrived at Camp Supply, where the Indians evidently intended to remain, but announced that he'd requested and received permission to launch an expedition to find a place for an Agency that would satisfy the Indians, within the boundaries of the Presidential Reservation established in 1869. He returned from his search down the North Canadian with rather vague news about a wonderful place, in all demonstrating a remarkable inability to see what was in front of his nose, and severely annoying Bonney, who was having enough trouble provisioning the Indians in the place where they actually wanted to be.⁴⁸ As I remarked earlier, the Blaine Escarpment area of western Canadian County has by far the worst water in the region, as Camp Supply had the best:

Much blackening and charring on the inceneration of the residue indicated the presence of organic matter. Any one of the three results in the table [including reactions indicating high nitrate concentrations] being sufficient to condemn the water as unfit for drinking purposes, further examination was abandoned. The contained solids make it even a very expensive water for laundry uses...[Of the corral well, Darlington Agency:] As foul a water as was ever sent to this laboratory for examination.⁴⁹

In the early decades of the 20th century, children at the Cheyenne and Arapaho Boarding School found employment delivering water from Caddo Springs (north of Darlington) to the townspeople of El Reno thrice weekly at six cents a gallon.⁵⁰ Surely this must show the farsightedness of Brinton Darlington in planning for the future of Indian industry.

The Darlington Agency area also lacked the good timber resources of the upper North Canadian. By 1874 when Fort Reno was being constructed, the Agency steam saw-mill had used all the available structural timber resources within, roughly, a fifteen mile radius of Darlington Agency (only pygmy post-oaks had ever been prevalent in the region). As a result, the entire saw-mill operation had to be moved to what is now Council Grove Township, just west of Oklahoma City.⁵¹

Most prominent Cheyenne leaders, busy around Camp Supply, dissociated themselves from the famous Darlington expedition. They were more concerned with trying to get Captain Bonney, who knew nothing about legal matters, to clarify provisions of the 1867 treaty. The document had been formulated with that masterly skill in avoiding attention to practical details which has so greatly and generally distinguished the best plans, proclamations, and laws established by United States governments in dealing with Indian problems.⁵²

Only the great leader Stone Calf was at first willing to humor Darlington. It was the general respect accorded his word by other Cheyenne leaders--like Little Robe, Big Jake, Big Horse, Red Moon, and Whirlwind--that led them to come to the new Agency in late 1870. Stone Calf seems to have argued on the basis of the general will of the Cheyennes to return to a settled existence after seventy-odd years of economic and military adventure.⁵³

Actually, the Cheyennes had never completely severed ties with their agrarian tradition. Grinnell found, from Sioux as well as Cheyenne informants in the 1890s, that some groups of Cheyennes continued seasonal plantings up to 1865.⁵⁴ Thus, a set of agricultural

skills was an aspect of Cheyenne human resource that could be drawn upon when nomadic existence became excessively risky.

In August of 1869, lands were reserved from the public domain by presidential order, fitting the bounds of the Cheyenne and Arapaho Reservation close to those recognized by the time of allotment.⁵⁵ It is worth noting that the reservation was a standard presidential reservation, rather than a reservation comprising "Indian Land" in the sense of land specified by congressional treaty. The presidential proclamation of July 1885, ordering an end to the cattlemen's enclosures of Cheyenne and Arapaho Reservation areas, was stated by President Cleveland to indicate that "the persons so occupying said lands with cattle are considered unlawfully upon the domain of the United States."⁵⁶

The early conditions of the new reservation life did not justify the Indians' jeopardizing their claim to the lands of the Camp Supply area. As the year 1871 progressed, none of the agricultural implements and seed promised by Darlington materialized. Little Robe and Stone Calf were concerned enough to visit Philadelphia, Boston, and New York. Their efforts to get some kind of accounting of the circumstances from Quaker "friends of the Indians" and government officials, however, resulted only in vague reassurances.⁵⁷

It is not strange, therefore, that the Indians used Darlington Agency exactly for what it was, a periodic ration issue station. The rations being very inadequate for subsistence, buffalo hunting for meat, hides and profit, in the Camp Supply area, continued to be the main Indian occupation.⁵⁸ The agency had become, to some extent, what the

Arikara villages and Bent's fort had been, a place to trade to some extent (though Camp Supply filled such a function also), and a place to pick up some agricultural goods.

Both the ration situation and early efforts to begin agriculture must have been affected deleteriously by Brinton Darlington's having assumed that Indians did not like Indian corn, maize, the staple that they had the most experience in growing and utilizing. Darlington urged that sugar and coffee, those hardy dietary fundamentals, be issued in place of corn. In 1869, he argued that the only reason the Indians were at all dissatisfied with white efforts to civilize them was the Department of the Missouri's stubborn determination to issue them maize.⁵⁹ Actually, it was the quality of the corn ration that was troubling the Indians: the issue corn hurt their teeth, according to Captain Bonney. The sugar supplied instead of corn was also far from perfect quality, dark and damp.⁶⁰

Cattle were the issue items that most served the Indians interests. This was not a function solely of the need for protein. The Indians preferred their cattle issued "on the hoof" rather than from the butcher's block, and this was permitted by the Army Commissary Department at Camp Supply in 1869, on the condition that the Indians returned the beef hides to the Commissary, which sold the hides to licensed traders.⁶¹ Such an amount of hides as was necessary for the Indians to mend their lodges, the Army allowed them to keep.⁶² Brinton Darlington, however, could not get the Indians to return surplus hides.⁶³

In their summer buffalo hunts of the period 1870-1874, the Indians

did not secure Buffalo hides for sale to licensed traders, but rather used the hides for domestic purposes. It was the good robes of the winter hunt that the Indians sold commercially, when the traders visited them in their winter camps on Wolf Creek and the Washita River.⁶⁴ Why, then, were the surplus cow hides retained? It would seem that the Indians, from the beginning of the Oklahoma reservation period, were beginning a fairly lucrative trade in cow hides to white traders.

Certainly, by the late 1870s, the beef hide trade was becoming important, especially with the decline of bison in the plains. An illustration of the importance is the Indians' sensitivity to market conditions. In the late fall of 1881, in a letter explaining that an Indian would be coming to Darlington Agency to return the horse of a Cheyenne, the Kiowa, Comanche, and Wichita Reservation agent asked Agent Miles about prices being obtained by the Cheyennes and Arapahoes for beef hides, saying that "his" Indians were getting \$3.20 per hide.⁶⁵ The Cheyennes and Arapahoes were, in fact, getting \$3.00 per hide at that time.⁶⁶

In February of 1882, the Agency Trader Tristram Connell complained to Miles about an incident with an armed Cheyenne group that he called "Dog Soldiers." He said that he was receiving the majority of beef hides brought in by the Indians for trade, until the "Dog Soldiers" sealed off his hide yard, and began ordering all Indians to take their hides to Connell's competitor, L. Candee. "After an earnest protest" from Connell, the guard was withdrawn.⁶⁷ The next month, Connell's price had gone up to \$3.25.⁶⁸ This is one of the nicest examples possible of a disciplined strike against a monopsonist. Mr. Connell

received the lion's share of the trade thereafter.

On the agricultural front, little progress was made in the early 1870s. The Quaker Brinton Darlington was replaced as agent in 1872 by another Quaker, John D. Miles. Red Moon, chief spokesman for the Upper Washita Cheyennes, called him a "not so good Quaker" as the well-intentioned Brinton Darlington.⁶⁹ In 1872 and 1873, Miles reported virtually no agricultural progress. He blamed this on drought and infestations of the area by grasshoppers.⁷⁰

In 1874, the trading firm of Lee and Reynolds contracted with the Cheyennes and Arapahoes to plant 250 acres of corn.⁷¹ Miles reported, however, that the Indians farmed only twenty to thirty acres of corn and melons, the 250 acre plantation being worked by "employees."⁷² This is an odd peculiarity in the reporting of the period. "Agency corn" was distinguished from that produced on what were called "Indian Farms," because the Indians worked them free of assistance. Most corn, however, was actually grown by the Indians, working as laborers on the "Reservation Farm."⁷³ In any case, Miles reported the 250 acre plantation a failure because of drought, though Lee and Reynolds were satisfied with the results. Miles wished to deprecate any direct Indian-trader exchange, because such dealings were soiled by their cash money character.⁷⁴

The 1874-1875 period was colored by a last round of Indian wars. The situation was quite complex, certain of the Indian groups leaving the region entirely to fight with the Sioux and Northern Cheyennes. Less terrible conflicts, and more local ones, surrounded incidents of white depredations of Indian horse herds, which were developing into

promising comerial occupations. Little Robe was the most prominent horse herder.⁷⁵

Elements of the war band of the Northern Cheyenne leader Turkey Legs were returned as prisoners to the Oklahoma Reservation in 1875. Some of these men were to rise to prominence later as Cheyenne farmers, including Turkey Legs, the son of the war leader. The earliest of Cheyenne reservation farmers, Big Horse, with his camp, was also of this group.⁷⁶

As I related in the Introduction, Big Horse's camp, upon surrender and return, turned to farming with an alacrity that must allay any suspicions that the Cheyennes had not maintained their agricultural traditions in the 1800s. Their incentives, in early 1876, were a curtailment of hunting privileges, delay in ration provisions, and the rise in reservation population through the addition of Northern Cheyenne groups, which put pressure on the few non-farming resources currently in the area. They could not wait upon the new technologies that Boserup hypothesized to be readily adopted by groups subjected to population pressure. They used what came to hand, including butcher knives.

By the fall of 1876, Cheyenne "farms" totalled seventy-five acres, a net gain of seventy-five acres from 1875; a gross gain too--there were no Cheyenne farms in 1875. The Arapahoes only had twenty acres of "Indian Farms" in 1875, though they had served as agricultural laborers on the "Reservation Farm" in that year. In 1876, the Arapaho "Indian Farms" acreage had increased by seventy acres only, so that, at least initially, the Cheyennes were out-stripping them. By the spring of 1877, the acreage figures were exactly the same for both tribes as they

were in 1876, progress in agriculture again ceasing.⁷⁷

The interruption in agricultural advance must count as an investment. The Cheyenne and Arapaho Transportation Company was functioning in 1877. One hundred and sixty horses and mules, the horses never before having been harness-trained, were brought by the Indians to Wichita, Kansas, the nearest rail depot, 165 miles from Darlington Agency. The Indians there were issued forty wagons and fixtures, eighty sets of double harness, and harnessed the wagons to haul 65,000 pounds of supplies back to the Agency. For this, the Indians received the wagons and harness, plus eighty plows, forty axes, forty whips, twenty spades, 1000 pounds of rope, and twenty dozen boxes of axle grease. The total cost was \$8,000, no more than had been paid white professional teamsters, in total, in 1876.⁷⁸

At last, the Indians, through their own enterprise, though the idea was that of Agent Miles, had begun to receive the implements that had been promised them since 1869. In 1877, however, Miles procrastinated when ordered by the Commissioner of Indian Affairs, along with Agents generally, to break sod so that the Indians could cultivate. He stated that he could not afford to contract for breaking more than a very small parcel for each of the many Indians who wanted to farm, and that he was disinclined to do so anyway unless the Indians broke equivalent parcels on their own. Heavy rains in May and June, followed by a dry summer made the ground extremely hard to break with cultivating plows (sod-breaking plows were not the same kind of implements as cultivating instruments). As a result of these conditions, little agricultural gain was made in 1877.⁷⁹

The Indians persevered to the limit of their means. New implements did not, however, flood into the reservation. In 1878 only half of the Indians who requested agricultural implements and seed could be outfitted by the Agency Head Farmer.⁸⁰

The dimensions of the Cheyenne and Arapaho Transportation Company were not much expanded as long as the Agency handled the actual cash flow. The Cheyenne Train of October 1879 was of only thrity-eight wagons.⁸¹ The original wagon issue, for four-horse teams, had been forty wagons. By December of 1884, however, a train of seventy-four outfits was handling contracts: sixty-three Cheyenne outfits, and eleven Arapaho outfits.⁸²

Some difference, good for the Indians, was made by the relaxation of Agency domination of the cash flow. The Agency, in 1879, was paying \$20.73 per ton, loads ranging from 1500 pounds to 3 tons. After the initial Agency deliveries from Kansas, the Indians contracted to freight to Camp Supply, a distance of 135 miles from the Agency, and to Robert Bent's ranch, forty miles from the Agency.⁸³ Trading firms, like Lee and Reynolds, were also contracting with the Indians directly.⁸⁴

In the 1880s, contracting began to be more individualized and the means of transport were distributed in a more complex fashion. Bills of lading were drawn up for the loads of individual freighters, or of small groups of freighters. Further, the freighters began bringing additional teamsters to handle multiple-wagon cargo.⁸⁵ By the time of the Tenth Census of the United States, conducted in 1881 by the Census Indian Division, "freighters" were distinguishing their enterprise from the occupation category of "teamster."

Those styling themselves "freighters," on the Census, numbered twenty-seven, with an average age of forty-two. Those calling themselves "teamsters" averaged twenty-three years of age, and were seventy-six in number. The freighters owned the most wagons, fourteen; while the teamsters owned only three wagons, but fifty-nine horses. The freighters owned only twenty-seven horses.⁸⁶

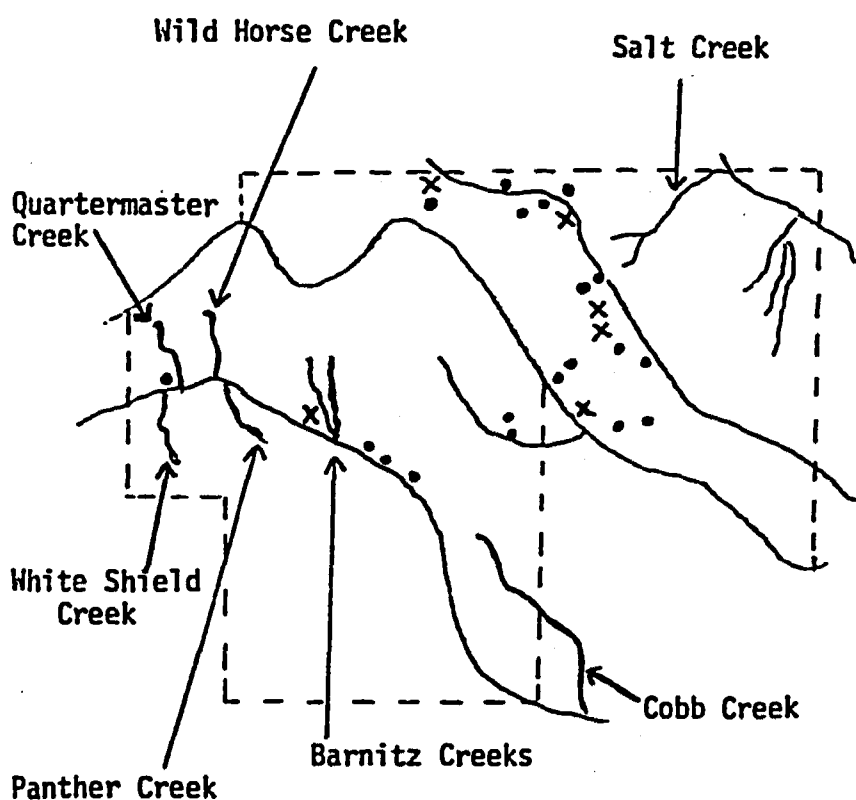
The situation emerging from the data can be interpreted as a division of labor within the road haulage industry, realized partly in differences in types of capital provided by the freighters and the teamsters. The scarcer resource was the freight wagon, and it seems to have brought more returns. Fifteen of the 71 persons listing their main occupation as farming in 1881, listed also a second occupation in freighting, including Big Horse. Two of the twenty-seven freighters listed farming as a second occupation. It would seem, then, that freighting was still an important means of capitalizing agricultural industry, and hard to break into by young Cheyennes.

Not all of the teamsters, of course, were interlocked with the freight industry. In 1879, John Seger began running buckboards and hacks for personal transport west and south of Darlington Agency, and he contracted to carry the U. S. Mail. Seger always preferred to hire Indians, and he located Little Robe on the Washita to oversee the route south of that area.⁸⁷ This brings up another point.

Map VII shows the distribution of the allotments chosen in 1891-1892, by those listing themselves as farmers or farmer-freighters in 1881. Map VIII suggests the close relationship of freighters and freighter-farmers to the agricultural industry, as the distribution of

MAP VII

1881 FARMERS WHO CAN BE IDENTIFIED WITH 1891-1892 ALLOTTEES



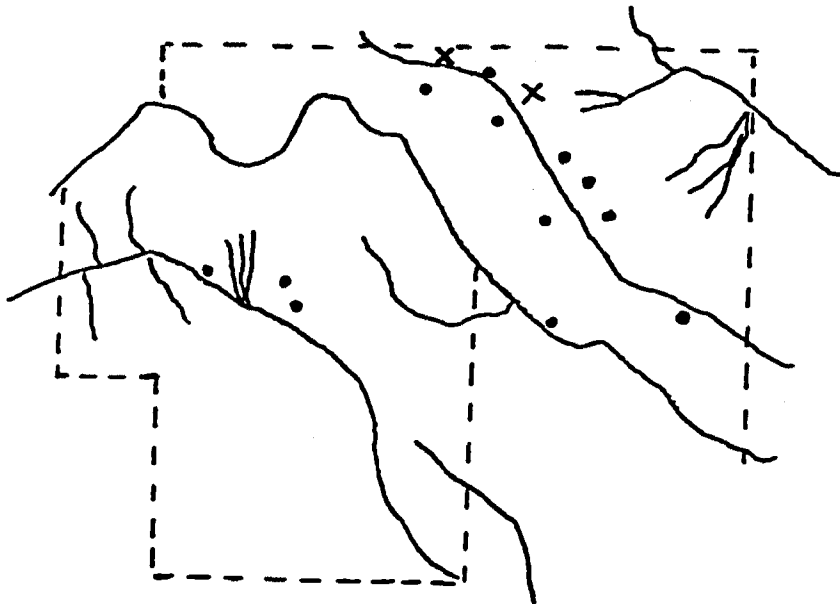
Farmers, 1881, As Allotted in 1891-1892 = ●

Farmers Who Also Freight = X

Source: Tenth Census of the United States(1880): Indian Division, District No. 1, Schedule No. 1, Population, Cheyenne Tribe, 1881(OHSAMD: Microfilm Publications, Roll CAA 4); Information abstracted for computer storage by J. J. Chou, University of Oklahoma.

MAP VIII

1881 FREIGHTERS WHO CAN BE IDENTIFIED WITH
1891-1892 ALLOTTEES



Freighters, 1881, As Allotted in 1891-1892 = ●

Freighters Who Also Farm = X

Source: Tenth Census of the United States: Indian Division.

their allotment selection pattern corresponds somewhat to that of the farmers. The Darlington Agency vicinity was not highly favored by those wanting to farm in the early Indian efforts to get the implements necessary for farming. Many of those farming in 1881 may have been under supervision and tutelage of the Agency Farmer, but Little Robe, at least, was acting independently on the Washita. In the fifth section of this chapter, I will document some farming in Cantonment in 1881.

The distaste for the Darlington Agency vicinity no doubt must be attributed to several causes, including the bad water in the area, and the absence of fence-post resources. The attitude of Agent Miles, around the year 1880, however, must have been a considerable factor. He could write editorials, in the Agency newspaper, stating "Certainly this country is better adapted to stock raising than to anything else, and the Indian is in his natural element more nearly when taking care of stock than in any other civilized prusuit."⁸⁸

Nonetheless, Indian as well as "Reservation" farms provided food for the growing town of Darlington. The tables of the three hotels that grew up in the town in the early 1880s were well set with dishes made from the agricultural produce, including the melons that the Indians loved to grow.⁸⁹

The principal non-agricultural pursuits were related to the construction industry. The firm of Lee and Reynolds handled much of the contracting, and they preferred Indian labor because it was very cheap. Nonetheless, in the 1878-1879 fiscal year, the Indians had earned about \$7,000 by brick-making, putting up hay, chopping and hauling structural timber, and splitting and hauling rails.⁹⁰ However, the Lee and

Reynolds contracts with Camp Supply, and with Fort Elliot, Texas, in 1878, calling for deliveries of softwood aggregating to 3850 cords, paid the firm 45,000 dollars.⁹¹

4. Social and Environmental Epidemiology of

Cheyenne and Arapaho Malaria

The generalized epidemic, however, soon calls into play adaptive changes in both the horse population and the infective agent which bring about an ecological equilibrium between them. The infective agent may remain widely distributed in the community, but its presence need not be associated with injurious effects. Disease, when it occurs, is due to a change in the conditions under which the ecological equilibrium had evolved.

—Rene Dubos, Mirage of Health.⁹²

There were many periods of delay or reduction of the rations owed to the Cheyenne and Arapaho Indians. One of the main defects of the 1867 treaty establishing their Oklahoma reservation, in Indian eyes, was the vagueness of the provision of the treaty concerning the rations. At their best, however, the rations were meagre. In 1881, Black Wolf sent word to Darlington Agency, through Camp Supply military authorities, that he no longer valued the Agency rations or the country south of Cantonment sufficiently to bother to return there at any time.⁹³ Black Wolf, and his people, had problems not shared with most other Cheyenne groups in Oklahoma. They were Northern Cheyennes.

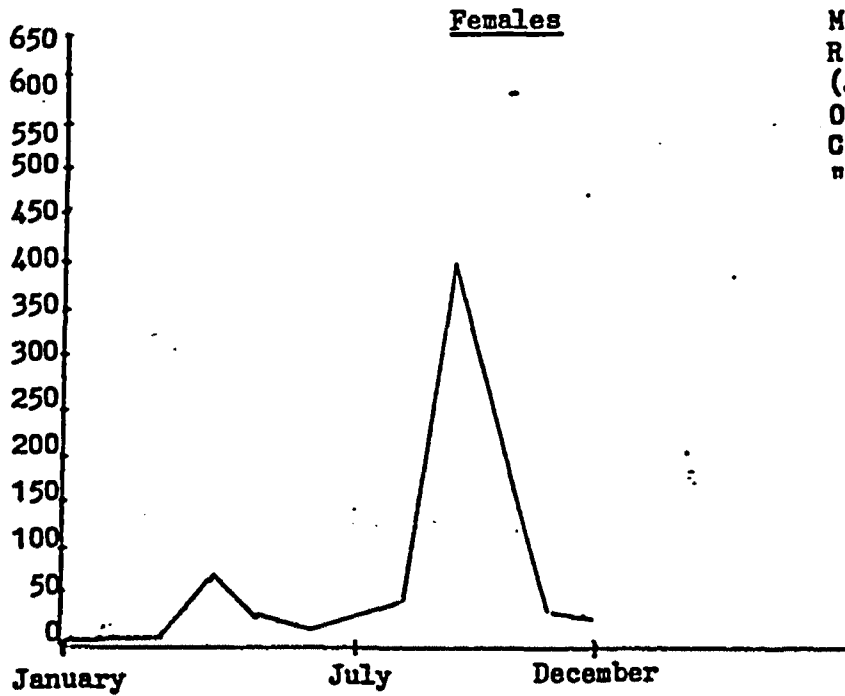
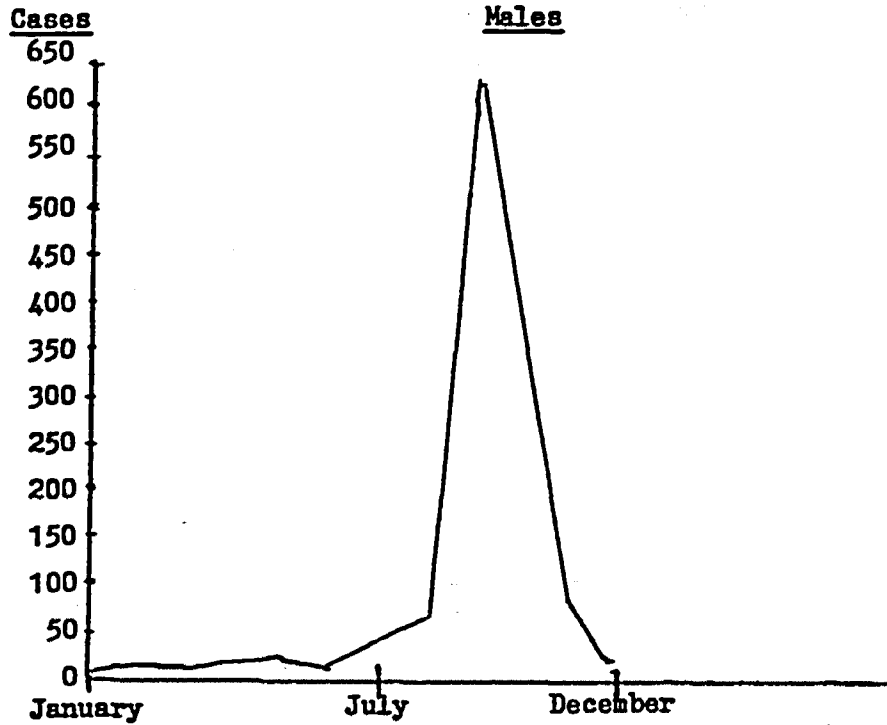
The Camp Supply area, of course, could still furnish plenty of game for subsistence, though the commercial trade through hunting bison had been finished by white hunter depredations. Another inducement to remain in the Upper Canadian area, rather than to press more strongly

for a return to the northern plains, resided in the character of the Cantonment post-trader, Henry C. Keeling. Keeling was, by his own admission, something of a young fool in those days, and he was constantly provoking the older Indians. He had, however, once found Black Wolf wounded and bleeding to death in the snow of the northern plains, and saved Black Wolf's life. Therefore, Black Wolf protected Keeling in the first years of Post Cantonment's existence, 1879-1880.⁹⁴ In the early 1880s the Dog-Men military society ("Dog Soldiers," sensu strictu) of the Cheyennes, took over the protection of Keeling from his own foolishness, in the interest of maintaining good relations with the Army at Cantonment, and to preserve a place of trade for themselves. (The Dog-Men policed trade in a number of ways, as I noted in the case of the beef-hide strike against T. Connell's establishment in the last section.)

Contempt for rations was, however, probably not the main reason for Black Wolf's preference for the Upper North Canadian region. The more settled industrial life of the Southern Cheyennes was not easily endured by the Northern Cheyennes for public health reasons. One of the principal causes of the September 1878 break out of many of the Northern Cheyennes from Oklahoma, after being brought there in great numbers in 1877, was the lack of quinine to abet the intermittent fever symptoms of the great malarial incidence amongst them in Oklahoma. There was a concomitant abhorrence of any effort to begin farming in the fashion of their Southern Cheyenne kinsmen.⁹⁵

In Charts I-IV, the incidence of cases of malarial symptoms are presented for 1876, 1878, 1880-1881, and 1884-1885. The numbers cannot

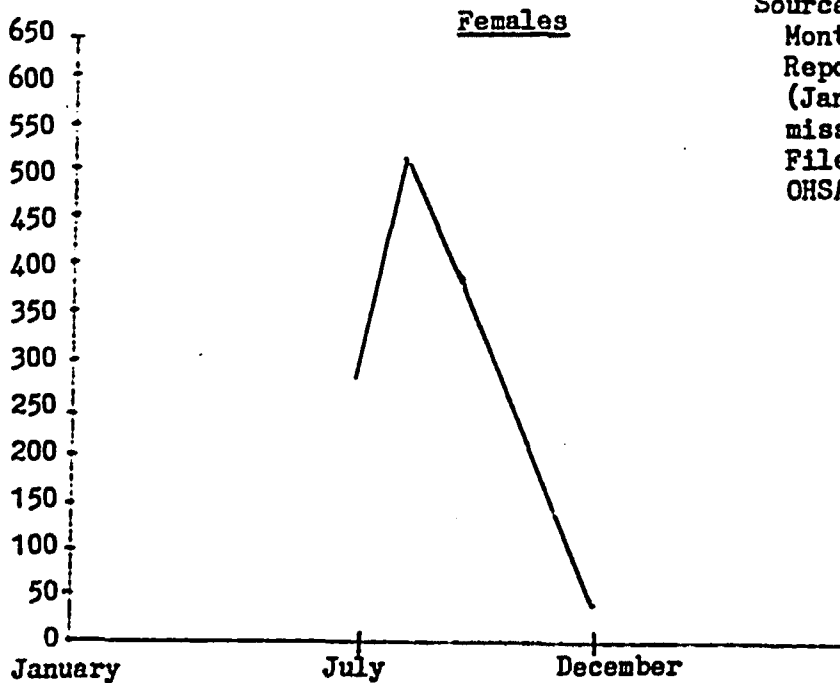
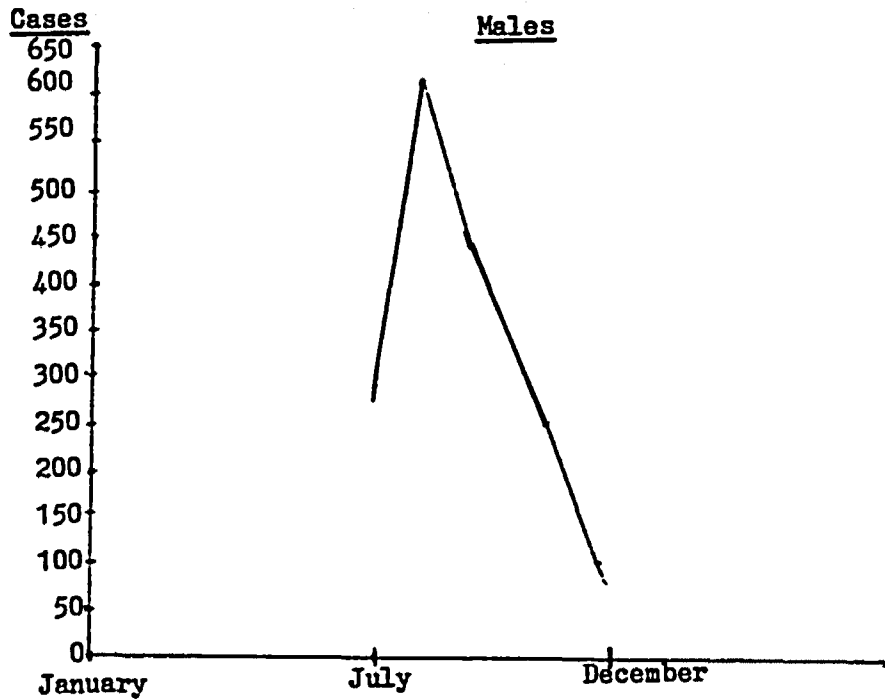
CHART I
INTERMITTENT FEVER INCIDENCE("QUOTIDIAN" AND "TERTIAN"),
CHEYENNE AND ARAPAHO RESERVATION, 1876



Source: Available
Monthly Sanitary
Reports, 1876
(July and
October missing),
CAA, File
"Doctors," OHSAMD.

CHART II

INTERMITTENT FEVER INCIDENCE("QUOTIDIAN" AND "TERTIAN"),
CHEYENNE AND ARAPAHO RESERVATION, 1878(July-December)

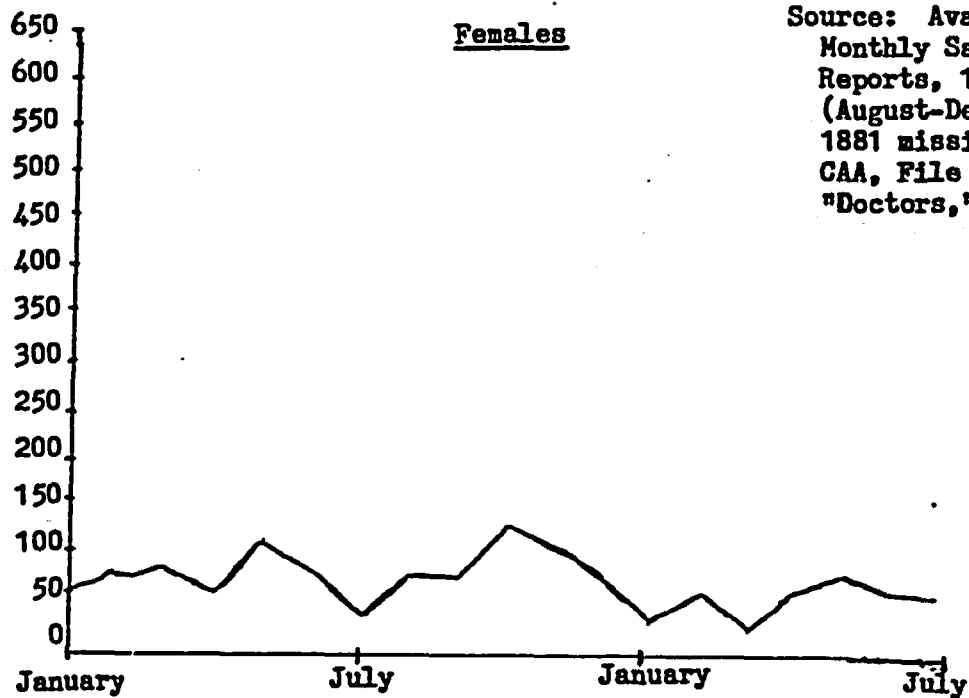
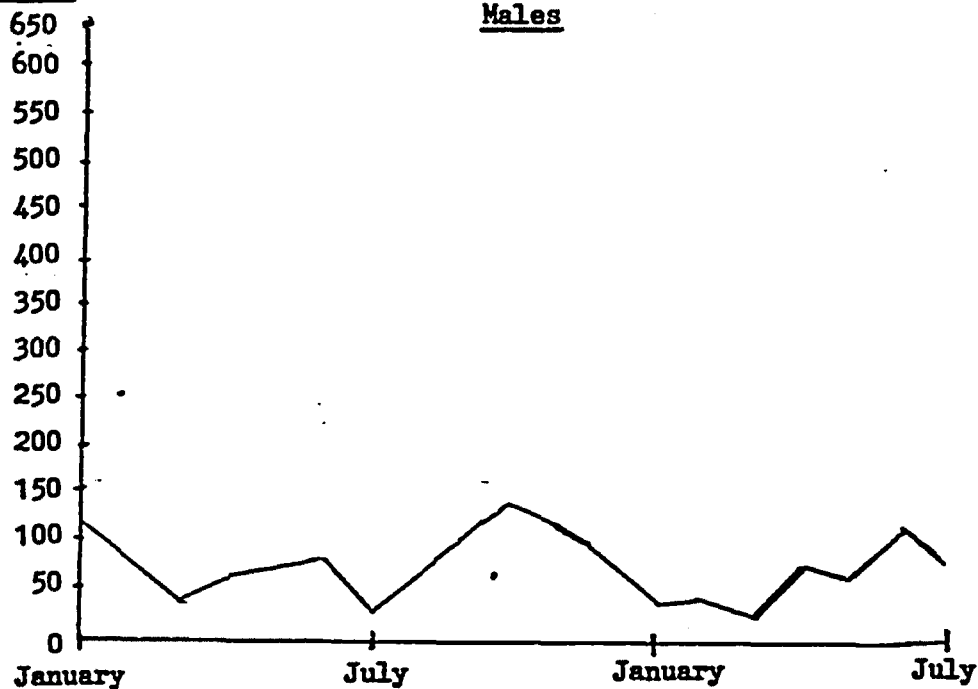


Source: Available
Monthly Sanitary
Reports, 1878
(January-June
missing), CAA,
File "Doctors,"
OHSAMD.

CHART III

INTERMITTENT FEVER INCIDENCE("QUOTIDIAN" AND "TERTIAN"),
CHEYENNE AND ARAPAHO RESERVATION, JANUARY 1880-JULY 1881

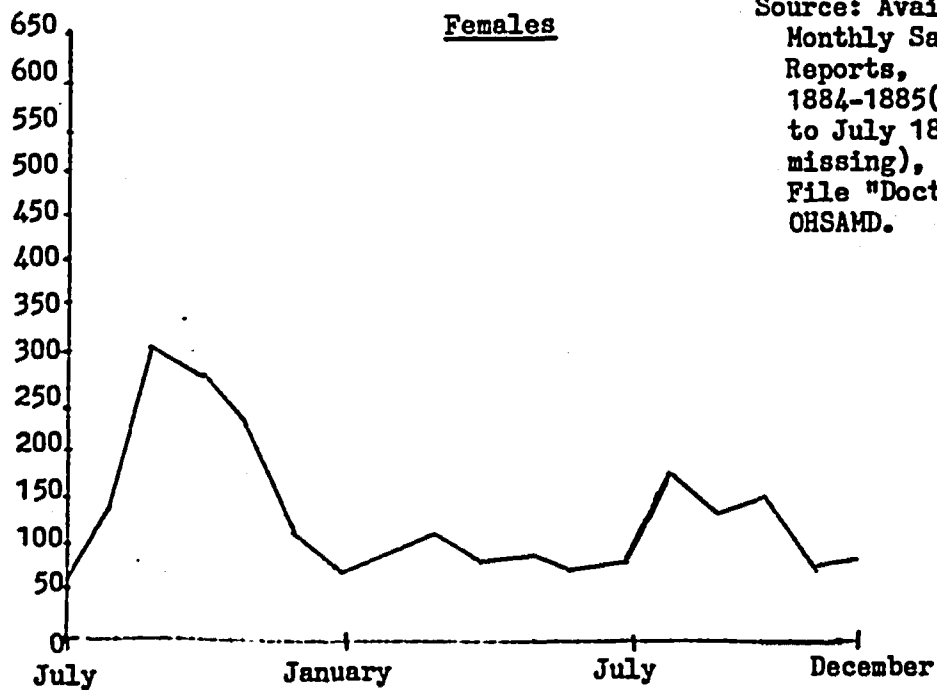
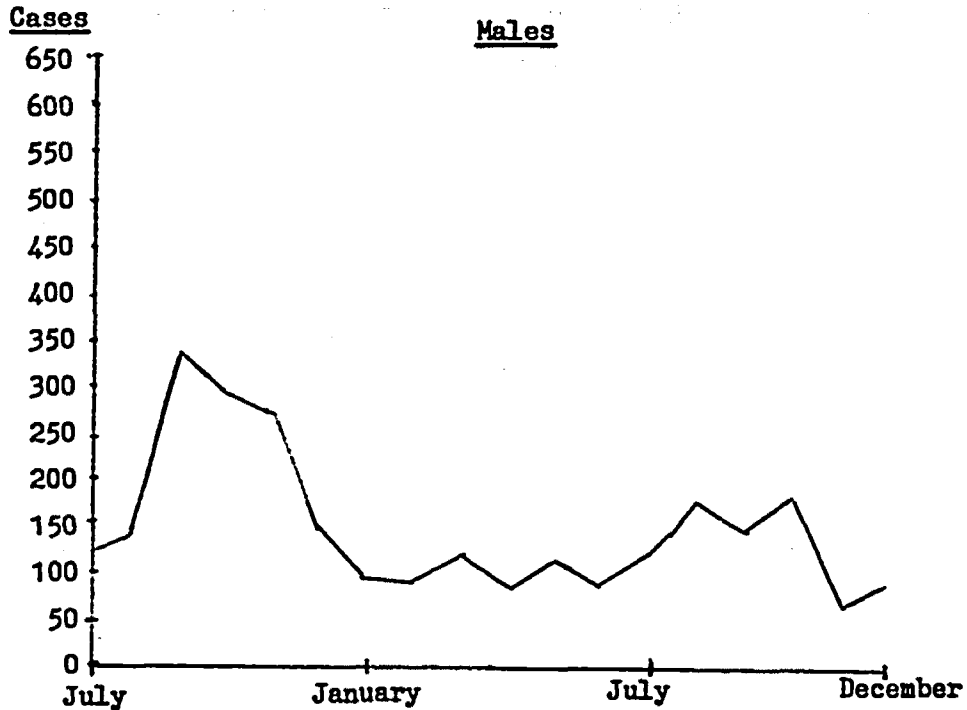
Cases



Source: Available
Monthly Sanitary
Reports, 1880-1881
(August-December
1881 missing),
CAA, File
"Doctors," OHSAMD.

CHART IV

INTERMITTENT FEVER INCIDENCE("QUOTIDIAN" AND "TERTIAN"),
CHEYENNE AND ARAPAHO RESERVATION, JULY 1884-DECEMBER 1885



Source: Available
Monthly Sanitary
Reports,
1884-1885(January
to July 1884
missing), CAA,
File "Doctors,"
OHSAMD.

account for all intermittent fever symptom cases actually occurring. There were no hospital facilities at the BIA and mission schools in the period, and the Indians could not always come in to the Agency doctor's office. Until 1876, the Agency physicians did not leave their offices to go to the Indians even in those camps that were in the Darlington vicinity. Dr. Jason Holloway began to make "systematic visits" to camps located three to eight miles from Darlington in September of 1876, and he estimated conservatively that about 50 percent of the camp Indians came under his observation.⁹⁶

Incidence of intermittent fever amongst females is charted separately from male incidences. This is because many males hunted on the Canadian and Washita Rivers from November through February.⁹⁷ The females were somewhat more sedentary. Generally, however, malarial symptoms in the spring were present in those who had shown symptoms in the fall, before leaving for the hunt.⁹⁸

The 1876 chart is provided along with the 1878, in order to show that the seasonality of the malarial incidences was marked even before Northern Cheyennes were concentrated in the area. The 1880-1881 chart shows the picture of a population growing more sedentary. The last of the great tribal buffalo hunts had occurred in the winter of 1877-1878.⁹⁹ The 1884-1885 chart shows the effects of a removal of most of the Cheyenne population from the Cantonment and Washita areas into the Agency vicinity; the removal being a function of the leasing of those areas to cattle corporations.¹⁰⁰

It would be unfortunate to look upon Chart IV as merely an effect of greater numbers of people being accessible to Agency physicians. The

change that is really interesting is in the amplitude of the seasonal cycle, and the months of particular malarial flareups. 1876 was also a year in which almost all Cheyennes were restricted to the Darlington vicinity, and it shows the same late-summer/fall higher incidence pattern as the 1884-1885 chart, concentrated in a single month. The incidences of 1884-1885, however, are generally lower than the 1876 occurrences.

Two other points should be made about the data. First, the female charts probably represent a nomadic pattern to only a slightly lesser degree than do those of the males. In the winter hunt of 1876-1877, for instance, the Cheyennes and Arapahoes hunted en masse only in November. They then broke down into camp groups to prepare buffalo robes for trade.¹⁰¹ They induced traders to come to their camps for the prepared robes.¹⁰² Since such preparation was the specialization of females, a goodly number of them must have accompanied the men.¹⁰³ This specialization was maintained throughout the reservation period. When the first log and frame houses were built for Cheyenne and Arapaho leaders in the 1870s, they were used primarily for hide and pelt preparation by groups of women, while family life occurred in family tents grouped around the houses, and this became a common camp configuration.¹⁰⁴ In his study of Cheyenne households in the North Canadian (Watonga) and Salt Creek (Eagle City) areas in 1930, the sociologist Ruggles found this configuration still to be standard, though the houses were storehouses for other things than hides.¹⁰⁵

The second point is that the 1880-1881 chart is probably representative of the entire Cheyenne population, though the Washita and

Upper Canadian areas were then more heavily inhabited than in 1884-1885. The Cantonment Cheyennes were treated at the military post there in 1879, but, in the fall of that year, the Post physician protested that he could treat no further cases because of his limited time and supplies for treating even the soldiers.¹⁰⁶ The return of most tribesmen of the Washita and North Canadian rivers periodically for rations usually kept the monthly reports reasonably accurate.¹⁰⁷ Red Bird, an Indian of the North Canadian, recalled that his camp came into the Agency regularly for the weekly or bi-weekly ration issue, so difficult was it to secure subsistence, even though the rate of issue of beef was only one cow per forty persons.¹⁰⁸

Malaria is a non-contagious disease, and its incidences can only be treated symptomatically. It is endemic to Oklahoma, but its present incidence is low, because of public health measures since 1926 in improved drainage, and pesticide attacks upon its Anopheles mosquito carriers.¹⁰⁹ Very long human sedentary occupation of malarial areas--characterized by high relative humidity and stagnant saline waters--usually results in genetic adaptation of human populations to the Plasmodium protozoa that cause the disease. Even within a generation, however, survivors of initial exposure reach a stable host-parasite physiological equilibrium with the Plasmodia. Humans rapidly develop into true alternate hosts for the Plasmodia, in competition with Anopheles species. The sedentariness aspect is vital, however, because both Plasmodium and Anopheles species quickly evolve specialized characteristic adaptations to very localized environments. A human's contact with species other than those of his location of

residence upsets the physiological adaptation.¹¹⁰

The conditions favoring Anopheles breeding are very felicitous in the south-central plains. Such brackish waters as those of the Arkansas, Cimarron, and South Canadian Rivers represent preferred egg-laying conditions for the mosquitoes. Such localities as these are preferred also because still waters are associated with them, often pools left after flood stages, though the South Canadian runs in spates, itself becoming a set of brackish, standing pools in dry summers. Long's expedition along the Arkansas, and down the South Canadian to the Red River, in 1820, found the bison and other animals of the region frequenting small, stagnant, brackish pools that seemed to be a marked characteristic of the whole area.¹¹¹

As I stated earlier, the waters of the Upper North Canadian are not saline. The canyons of the region, furthermore, have freshwater springing in them the year round. The Washita has a relatively narrow valley, and it is the deepest river in Oklahoma, with the steepest banks or natural levees. It is subject to much flooding, but most of the instability of the river channel, leaving depressions in the flood plain where stagnant waters might remain, are man-made effects, resulting from efforts "to shorten the river channel and increase its gradient by cutting through the meanders."¹¹² The non-saline and reliable-flowing character of the river makes it, along with the Upper North Canadian River and the canyons of the Whitehorse-Dog Creek Permian Formations, the most salubrious of western Oklahoma residential areas.

These facts may suggest that malarial incidence might have increased in the 1884-1885 period simply because the Cheyennes and

Arapahoes were being confined to the unhealthiest of reservation areas. As I said before, however, it is the seasonality and the amplitude of incidence curves that tell the most interesting story.

There is a greater seasonality of Anopheles breeding in areas of periodically low relative humidity and great heat, conditions accentuated on semi-arid grasslands between major river valleys. This prevents adequate stabilization of host-parasite adjustments when the situation is one of human nomadic or semi-nomadic movements over such semi-arid areas. Alleviation of symptoms is not as considerable, and deaths of "new susceptibles," represented most prominently in increase of natural abortion rates, and rates of infant mortality, are not uncommon.¹¹³

The bearing of malarial problems on conditions of periodicity of human migrations, seasonality of sedentariness, especially as it bears upon semi-nomad/village-horticultural symbiotic groups, has been very well defined by geographical research in Africa in recent decades.¹¹⁴ The population movements involved need not be of dramatic distance to be correlated with dramatic epidemiological effects. The distances in Africa often range between thirty and forty miles.¹¹⁵

The temporal shocks to human populations of highly seasonal exposures to Anopheles species in nomadic, semi-arid grassland contexts are mirrored in spatial shocks, where pioneer agricultural settlement expansion of short range along river systems occurs. The extreme localization of the adaptations of particular Plasmodium and Anopheles species results in a regime of "new susceptibles" exposures in both the grassland-nomadic and agricultural-pioneer cases.¹¹⁶

The lessons to be learned from the foregoing facts will now be applied to the Cheyenne and Arapaho case. After leaving the non-malarial northern plains environment, the Cheyennes were "new susceptibles." Seasonal grassland nomadism, which continued for large numbers of Cheyennes up to 1878, was, literally, dangerous to their health. The malarial environment could only be well-adapted to by sedentary occupations. The marked seasonality of symptoms, shown in Charts I and II, corresponds to seasonal nomadism.

Chart III shows a dampening of the seasonality, as buffalo hunting declined as an occupation, and the greatest movements were only for road haulage. The story told by Chart IV is a somewhat different one. A good many Indians were being removed from their preferred localities and concentrated in a new one. Thus, there was a "new susceptibles" situation of the relocation variety, rather than one related to seasonality of nomadism.

With the advent of the Lee administration of the reservation, beginning in August of 1885, the cattle corporations were evicted from the reservation. After four months of pressuring the Indian Office, Lee was able to allow the Indians to return to the Northern Canadian and Washita River environments from which they had been removed.¹¹⁷ He established the Indians as agricultural colonists in those areas, setting up District Farm Stations, and providing for the issue of cattle at the Districts, so that the Indians would not have to journey the "forty and sixty miles" of the distances from the agricultural colonies to the Agency to receive their rations.¹¹⁸ The figure of forty miles, as I noted earlier, is of proven significance in terms of the

localization of Anopheles and Plasmodium species adaptations.

The incidence of malarial cases after the resumption of Monthly Sanitary Reports in March of 1886 is not charted. This is because the maximum number of cases reported, for any month through 1889, was twenty-six for males in August 1886, and, for females, twenty-six in August 1888. The agency physicians received reports regularly from the districts through the District Farmers or the Indian police. We see, then, that sedentariness was conditioned in the Indians by more objective forces than the caprice of white administrators and idealists. We see also that the importance of the Cantonment and Washita River areas for the Indians was based on more than sentiment, or traditionalist antipathy to Agency proximity.

5. Geopolitics and Ecology of Reservation Enclosure

Especially for animals who can seek out micro-environments that suit them, effective environments may be far less different in different localities than they may seem from the gross appearance of the climate and biota. Alternatively a vital but subtle element of the environment may vary without being apparent...

--R. C. Lewontin, The Genetic Basis of Evolutionary Change¹¹⁹

In the writings of Edward Everett Dale, the general historical importance of cattle ranching on the Cheyenne and Arapaho Reservation in the early 1880s was inflated out of all proportion. Dale interpreted the July 1885 presidential proclamation, ordering removal of the cattlemen's enclosure movement from the reservation, to be "the first step in the downward trend" of the cattle industry as a whole.¹²⁰ He thought this sad, unjust to "the brave men who risked their lives and

fortunes on the broad plains of the 'cow country'."¹²¹

The cause of the July proclamation was considered by Dale to be troublemaking by the Indians, charging tolls from movement of herds in northwestern Oklahoma, and stealing cattle from the whites.¹²² It does not bother Dale greatly that President Cleveland issued the July proclamation before he had received General Sheridan's report on the seriousness of the reservation situation, or that Cleveland issued a general order in August to clear all components of the public domain, Indian country or not, of private enclosures.¹²³

Actually, the first and last institution to make real trouble for large cattle corporations was the United States government. This was appropriate, in that the range cattle industry, before 1885, was based on the "free" lands of the public domain. The cattlemen were "tenants by sufferance."¹²⁴

Before 1885, the United States Senate had not been adequately informed of the development of the cattle industry on public land. The Senate requested the Secretary of the Interior to report on grazing contracts on Indian lands in particular, in 1884. The Secretary's January 1885 report in reply stated that the cattlemen in the 1870s had been allowed freedom of "unoccupied" parts of Indian country on "sufferance." However, the cattle operations in Oklahoma had severely depleted the land of timber--the black walnut in particular being singled out. Thus, the Secretary had recommended the execution of formal contracts, including the ones for the Cheyenne and Arapaho Reservation, in order to restrict the range of actual cattle operations, define them clearly, and thus establish a way of making cattlemen more

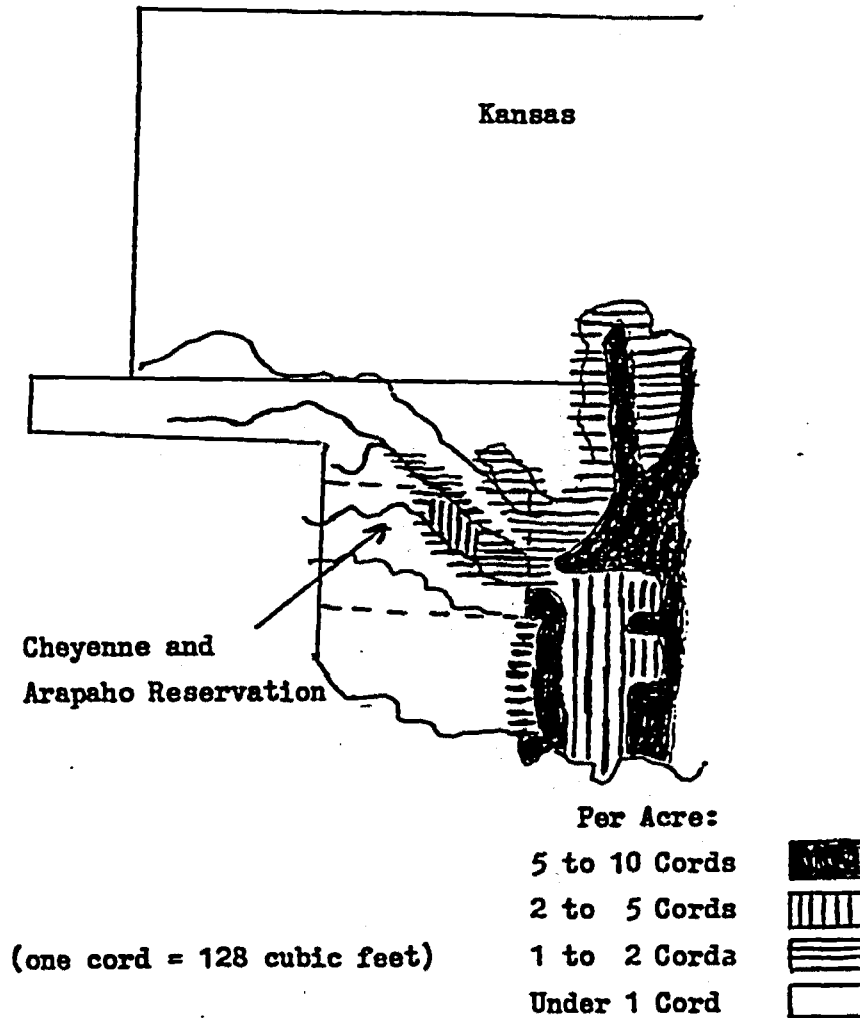
surely accountable for their activities.¹²⁵

It is disputable whether the leases very greatly served the protection of timber resources, since the strict legal demarcation of lands had to be concretely realized in a great deal of fencing. In fact the relatively good quality of stands of trees in the Cheyenne and Arapaho Reservation, when compared with other areas of western Oklahoma and Kansas, seems to have been one of the main attractions of the area for cattlemen. By 1877, structural timber was being imported into Kansas from the Upper North Canadian area.¹²⁶ The cedar canyons of the Gypsum Hills formations were the prime resource area for fence posts for all settlers in west-central and northwestern Oklahoma long after allotment.¹²⁷ Stands of cottonwood trees, which dominated Kingfisher Creek and the North Canadian River in the Blaine Escarpment area of Canadian County, were utilized for making sheds, but had no use in more permanent structures or for fence posts.¹²⁸ Map IX shows the distribution of all types of timber in western Oklahoma and western Kansas, in terms of cords per acre. It is easily seen that the Watonga, Cantonment, and Deer Creek district areas contained the most dense stands. A wagon trail for cattle round-up purposes was well established near the cattle corporation headquarters on Deer Creek, by the time of the spring round-up of 1883 (round-ups were no longer mainly undertaken on horseback by that time).¹²⁹

The amount of structural timber used up in fence posts on the reservation was relatively enormous. John Seger, in charge of fencing for the Cheyenne and Arapaho Cattle Company (not an Indian corporation), contracted with the Indians to supply him with 1100 cords of wood, in an

MAP IX

TIMBER RESOURCES OF WESTERN OKLAHOMA AND KANSAS, 1883



Source: "Map of the United States Showing the relative average Density of Existing Forests," prepared under the direction of C. S. Sargent, Special Agent(1883), Tenth Census of the United States.

area where the maximum cords-per-acre was ten and the maximum rarely found.¹³⁰ The average height of blackjack and post oak trees, the all-area dominants, in west-central and northwestern Oklahoma is twenty feet, except along the South Canadian, where the average height is fifteen feet. Penfound has argued against calling such phenomena "savannahs," since "the component woody plants are stunted, have single trunks, and possess crowns which have greater depth than the bole length."¹³¹ Under the July 1885 proclamation, the cattlemen were allowed to remove their fencing wire, but the military tried to prevent the removal of fence posts, so scarce and valuable were they.¹³²

There were other attractions besides wood to be found by cattlemen in northwestern Oklahoma. To understand such incentives, however, one must counter some popular mythology concerning the link between cattle grazing industry and the short-grass prairie of the "broad range" of "cow country."

Despite the vivid, imaginative representations of such writers as E. E. Dale, and the specious ecological arguments of Walter Prescott¹³³ Webb, the cattle industry was not in the main well adapted to the short-grass environment. The cattle complex originated in the Old South, in the tall-grass coastal prairie, and diffused up the coastal rivers of Texas in the first two decades of the 1800s.¹³⁴ The eventual emergence onto the semi-arid grasslands of northwestern Texas does not represent an appreciation of any advantages specific to that area's ecology. Rather, the frontiers of all food-production industries in the Old South were pressed westward after the invention of an economical cotton gin accelerated the conversion of food production lands to cotton

plantations.¹³⁵

As important as the lush character of the grass in the southeastern coastal prairie, in the cost-efficiency of cattle maturation, was the salinity of the grasses and waters. It was expensive later to supplement cattle diet with salt on the semi-arid plains.¹³⁶ The saline character of many creeks and rivers of the central plains has already been delineated in this chapter. Mention should also be made, however, of the presence of saline marshes in western Oklahoma and Kansas.¹³⁷ Large cattle ranches in the Camp Supply area in the 1890s were careful to get title to lands where cattle could have access to the federal saline reserves of Woodward County. The group of Cheyennes living northeast of Canton around the turn of the century were called the "Swamp Group." Saline marshes were present in the allotted lands along Kingfisher Creek and Salt Creek, Cimarron River tributaries. The Kingfisher area was much prized by both Cheyenne and white cattlemen in the late 1870s.¹³⁸

The most attractive feature of the Reservation, however, was undoubtedly the simple fact of geopolitical position. The Chisholm Trail, originating in the 1860s, and the Western Cattle Trail, developing in the 1870s, bordered the reservation on the east and on the west. The Arapahoes first petitioned the BIA to tax this traffic in trust for the Indians in 1871, and the BIA accommodated them.¹³⁹ The Comanches began exacting tolls by the late 1870s on the Western Trail.¹⁴⁰

Cattle drovers, however, preferred these exactions to the tolls charged, and the cattle confiscated, by Arkansas and Missouri white

settlers upon the Shawnee Trail that traversed those states. The opening up of railroad depot's in Kansas in the 1860s and 1870s prompted the development of the trails through Indian country.¹⁴¹

The entire complex of round-up, branding, and long-distance overland drives was costly to the cattlemen. This was partly due to their dependence upon the cowboy to handle these operations. Colorado cattlemen were the most vehement critics of the ways the cowboys savaged their cattle, but the frequent strikes by unionized Texas cowboys for higher and higher wages, and for the right to appropriate unbranded ("maverick") range cattle, unsettled the nerves of every state's cattle corporation managers.¹⁴²

The origin of the round-up was part of an adaptation to a change in the socio-ecology of cattle herds after they began to inhabit the short-grass prairie. The cattle began to roam in small groups along the attenuated rivers and creeks of the plains, in variegated patterns, and were hard to root out of their winter shelters in canyons. This new socio-ecology was deprecated by cattlemen in the early 1800s as a reversion to a semi-wild state, likened to that of the buffalo.¹⁴³

What Dale called the "broad range" was actually a confined, linear, branching system of rivers and creeks, The Bureau of Statistics (Treasury Department) 1885 Report on the western cattle industry, was an early attempt to dispel the impression that the cattle industry was a function of the wide-open spaces of the grasslands:

...throughout the range-cattle area grazing is limited mainly to strips of land from 12 to 14 miles in width along streams of water, while beyond such limits there are, in certain sections, large bodies of land abundantly supplied with nutritious grasses

which are available for pasturage only in driving herds from the valley of one stream to that of another.¹⁴⁴

Where topography was extremely variegated, dissected by creeks or low-lying hills, and replete with canyons, the range was considered "very unaccessible to handle cattle" (an excuse given to an Army Lieutenant in 1885 by a cattle corporation manager for not removing his herds with alacrity).¹⁴⁵ The area referred to in particular was along the Upper Washita. The extreme northwestern part of the reservation, east and south of Wolf Creek was, in contrast, as good for round-up wagon traffic as it was good for grazing.¹⁴⁶ The Washita River Valley was not a very good place for grazing in any case. Until the introduction of Midland Bermuda Grass into the region after World War II, acres in pasture in almost all Washita River counties could be counted on the fingers of one hand. Frequent floodings ruined the native pasture grasses.¹⁴⁷

Long overland drives were necessary because the chief demand for cattle was in the northeastern United States. This was not because the peoples of Pennsylvania and New York were great beef eaters. Pork consumption was greater than the consumption of all other meats combined until the 1950s.¹⁴⁸ A very large component of northeastern cattle demand in the late 1800s was to serve export markets, shipping to Europe mainly.¹⁴⁹

The distance of market demand from production areas increased the uncertainty of the livestock industry. Symbiosis with plantation operations in the Texas coastal region helped to stabilize the financial base of the cattle industry in the 1820-1850 period.¹⁵⁰ Cattle raised

in northwest Texas, however, developed no immunity to the tick-born Texas Cattle Fever endemic to the coast.¹⁵¹

By 1880, it was accepted that special permission could be requested to drive cattle from northwest Texas, through the Cheyenne and Arapaho Reservation, to depots in Kansas, in order to avoid "the lower Texas and Gulf Cattle fever."¹⁵² In 1879, however, immune cattle from south Texas were being shipped to the reservation through north Texas ranches.¹⁵³ In this period, large drives of southern Texas cattle to the north were becoming common.¹⁵⁴ The reason for avoiding the southeastern ports was no longer a desire to avoid the cattle fever.

The pull to the north was a function of the fact that cattle could not be matured and fattened for market by grazing the short-grass prairie.¹⁵⁵ Much of the cattle shipped from Kansas did not go immediately to slaughter, but only east as far as tall-grass areas where maturation was feasible through grazing.¹⁵⁶ With the decline of the buffalo, however, tall grass resurged in the northwestern plains margin, and this area became the object of intermediate cattle movements.¹⁵⁷

Intermediate areas, however, were fast-growing into primary production areas in competition with the Texas producers. The growth of agricultural settlement immediately after the Civil War permitted cattle to be held in the central plains area, in anticipation of improvement in northeastern prices. Refitting posts, like the earlier one of the Bents, for immigrants to the west, became places that bought hay from homesteaders, which could be exchanged for cattle.¹⁵⁸ From a convenience for Texas cattlemen, however, such practices grew into competitive cattle production areas in the central plains. Colorado

cattlemen were the first to shut their doors to the Texans.¹⁵⁹ Oklahoma panhandle cattlemen followed suit.¹⁶⁰ Thus the importance of western Oklahoma as a corridor to the north grew rapidly.

Kansas, Texas, and northwestern plains cattlemen, moreover, were developing interlocking financial structures in the late 1870s. They lured eastern bank and stockmarket money. The eastern capital was attracted by the seeming lack of land-purchase costs for large public domain operations.¹⁶¹ As I have already related, the Interior Department was getting nervous about such operations, and soon began requiring formal leasing contracts with Indian tribes. Furthermore, small-scale cattle ranchers in the northwestern plains were claiming and buying up the public domain lands in that area, and denying Texas/Kansas corporations access.¹⁶²

Even Kansas began to be closed to Texas herds in the early 1880s. The droughts of 1878-1881 turned many Kansas farmers into sheepherders. When the wool market fell through in 1882, however, the sheep raisers turned to small-scale cattle operations on the land to which they had gained title.¹⁶³

Thus, the large eastern-financed cattle corporations were "forced to buy land to protect the capital already invested or to go out of business."¹⁶⁴ A terrific competition developed over land titles among corporate cattlemen, much to the chagrin of the eastern investors who were now confronted by the need to pay for lease or purchase of lands, when it was the supposed freedom of the range that had attracted their capital in the first place.¹⁶⁵

Meanwhile, the extensive fencing and subdivision of Indian lands

and other components of the unclaimed public domain, by the cattlemen, was beginning to bring protests from federal personnel who required freedom of movement on public lands: mail carriers; soldiers; and freighters.¹⁶⁶ Big Horse, freighting north of the Cimarron, on the September freight run, was so exasperated by the cattlemen that he fired the range, one of the best-authenticated instances of Indian violence with respect to the cattle industry.¹⁶⁷ The Cantonment Indians were, in the year of this occurrence, 1881, content to acquaint the military authorities of Post Cantonment with the boundary between the reservation and the "Strip" or "Outlet" of land dividing the reservation from Kansas, land owned by the Cherokee Nation and leased to cattle corporations. The Cantonment Indians, led by Stone Calf, relied upon the Army to keep the cattle of the corporations within their legal bounds.¹⁶⁸

Big Horse could not have had any other reason for firing the range; he was in the area on Transport Company business. He never objected to the cattlemen's leasing reservation lands; his was the leading signature on all contracts. The region was outside the hunting range established in the 1870s, in any case. Only Eagle (Chief) Creek, to the south and east of the areas of burning, was a popular hunting camp.¹⁶⁹ The Eagle Chief Creek area was utilized by the Cheyennes in the 1880s, but they offered the cowboys of the area only surliness, not violence, grudgingly recognizing the right of the cattlemen to the region, and even trading with the cowboys occasionally.¹⁷⁰ Sometimes, the Cheyennes would try to bluff the cowboys by pretending to be Post Cantonment Scouts.¹⁷¹

In April of 1884, the Commissioner of the General Land Office declared such actions as Big Horse's legal. The Commissioner was responding to the complaints of small-scale cattlemen that the extensive enclosures of the cattle corporations were denying settlers access to public lands that could be rightfully claimed as homesteads, or purchased outright. The Commissioner's ruling permitted destruction of the enclosures and discretionary privileges for lawful claimants with respect to the disposition of cattle found in the areas legally claimed.¹⁷² In May of 1885, the Treasury Department recommended against leasing of large areas of the public domain to cattle interests. Deprecating "the so-called Indian problem," the report featured as its main reason the likelihood of further promoting the oligopolization, or monopolization of the structure of the cattle industry, if the government were to, in effect, subsidize large concerns by preventing purchases of land by small-scale cattlemen, all the land being taken up by leases.¹⁷³ Thus, the July and August 1885 proclamations ending enclosure of the public domain must be seen to have taken on an aspect of inevitability.

The proclamations did not, in and of themselves, have any desperate effects. The beginning of a general downswing in the national economy in the middle 1880s was detected early by some eastern bankers, and they were already pulling their money out of the cattle corporations before the proclamations were issued.¹⁷⁴ Eastern investors in general had been becoming cool toward the incessant demands for more capital (including personal loans) by their western managers. They were becoming aware that the reports to stockholders were doctored. As early as 1877-1878, the easterners had begun pressing the western cattle associations to

formally incorporate, with most stock to be owned by the easterners, because the investors simply did not trust the management of the westerners, and desired greater accountability.¹⁷⁵ In 1887, after a brutal winter had killed much of the real stock, the financial bubble burst. I think that Mary Hargreaves has summarized the events best:

Stock-raising was then characterized by the open-range system, providing neither extra feed nor shelter until the disastrous losses experienced on over-crowded ranges after the dry summer and severe winter of 1886-1887. The transition toward less hazardous procedures was prolonged by vast additions to the public lands available for grazing...¹⁷⁶

The clearing of the enclosure movement from public lands was not the fault of trouble-making Indians, nor was the decline in the cattle industry that Dale thought to descry. The Indians did not cause the inclement weather of 1886-1887, nor did they encourage the stockmen in non-conservative management. If anything, the opening of the reservation through lease was a factor in encouraging poor management, by allowing the cattle corporations more rope with which to hang themselves.

In any case, the removal did not inflict terrific trauma on most corporations. Those cattle companies with a base in the Cherokee Outlet, like the Dickey Brothers and the Maybury and Lewis Company, did not have great difficulty in removing all cattle and effects from the reservation within a month.¹⁷⁷ The demise of companies like Dickey Brothers was precipitated by the climatological events of 1886-1887, but their financial structures had been rotten for years. It took months to straighten out the Dickey Brothers corporation books, after the company went into receivership in October of 1887.¹⁷⁸

For the Indians' part, the loss of revenues from leasing that followed the removal orders could not have been terribly traumatic. They were only earning \$12.33 per capita each year. The Interior Secretary himself admitted in 1885 that the BIA was aware that the two cents per acre leasing charge was only half, perhaps only a third, of what could easily be gotten for the land in lease.¹⁷⁹

Those cattlemen in Woodward County, Oklahoma, who continued to plan in terms of Dale's "broad range" in the 1890s, all foundered upon the severe winters and dry summers of the turn of the century. By 1901, they had ceased to function. The cattlemen who prevailed did not greatly stock the land, and were content to re-cement ties with farmers growing, and merchants storing, feed-crops, mainly sorghums.¹⁸⁰ In this manner, an ancient, conservative symbiotic pattern of the plains was mimicked.

The diffusion of winter wheat into northwestern Oklahoma brought a new dimension to the symbiosis. Northwest Oklahoma farmers today often rent their winter wheat fields out as pasture. This is done for the sake of the animals' dung, and the cultivating influence of their hooves, as much as for ready money. When the fields are very wet, or are frozen hard, however, such rentals are curtailed, lest the cattle trample the new wheat into the ground.¹⁸¹

The early over-stocking of western Oklahoma has left a deep mark on the country. Overgrazed mixed-grass prairies are always poor habitats for birds and small mammals that prey upon grasshoppers. Hence, grasshopper depredations of natural vegetation and crops generally increased until the stricter enforcement of conservation practices in

the 1930s.¹⁸² In the early 1880s, cowboys in northwestern Oklahoma watched as fewer and fewer curlews returned to the area in the springs, from the north. In the 1870s the cowboys had watched the curlews bore under cow chips after insects, flipping the chips over into buffalo wallows and hollows in great numbers.¹⁸³ The overgrazing of the land drove the birds away, a boon to insects of all kinds, including the mosquitoes who enjoyed laying eggs in stagnant pools no longer filled up by buffalo and cow chips.

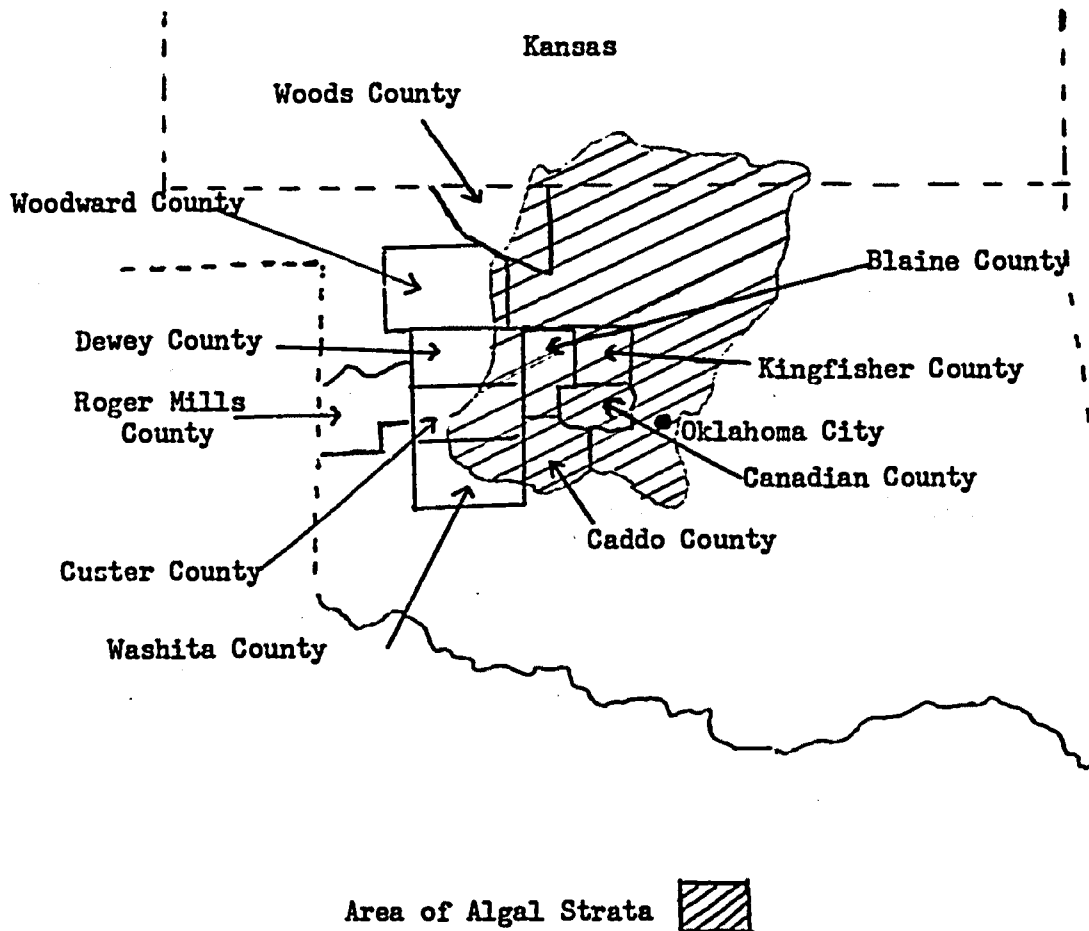
In areas of farming, during the long second stage of succession after the abandonment of fields, in which the annual wire-grass dominates, the only security against erosion is a thin crust of blue-green algae.¹⁸⁴ (See Map X.) Even when bunchgrass species begin to assert themselves in the yet longer third stage of secondary succession, only great moderation in grazing the lands will prevent the trampling of the vital algal crust into erosive powder.¹⁸⁵

By 1881, the herds of the Dickey Brothers and other cattle corporations were trampling the fields of Cantonment Cheyennes. Stone Calf, Cohoe, and Sand Hill protested to the Army, which took steps to remove the herds in the spring of 1881.¹⁸⁶ The cattle were back by fall, however, and Agent Miles had occasion to request that the Dickey Brothers remunerate some Indians for trampled corn.¹⁸⁷

It is hard to reconcile such facts with the language of the petition drafted by Miles in 1882, for the signatures of some Indian leaders, imploring the Commissioner of Indian Affairs to permit the leasing of the western reservation. The lands of the Washita and the Upper North Canadian are described as "almost worthless for agricultural

MAP X

REGION OF EXTENSIVE SURFACE STRATA OF SOIL ALGAE



Source: Booth, "Algae as Pioneers in Plant Succession," p. 39.

purposes and unoccupied by our people (excepting a few families)." The Reinach-McClain soils of the Washita River valley are generally considered by agronomists to be the most productive soils in the state.¹⁸⁸

Further duplicity may be seen in Miles' report to the Commissioner of Indian Affairs in 1882. He states that "the greatest source of annoyance has been the promiscuous drive of cattle in almost every direction over the reservation by herds passing from Texas to the shipping points at Caldwell and Hunneyville, Kansas." Miles further stated that he was getting the traffic under control and preventing cattle herd passages more than ten miles west of the Agency offices.¹⁸⁹

In 1881, however, Miles personally authorized the blazing and mapping of a new cattle route through the heart of the reservation by J. W. Chastain.¹⁹⁰ The Indian Office, in 1885, denied to Captain Lee that they had ever been informed of such a route.¹⁹¹ This route, nevertheless, crossed into the reservation from the Washita, sixty-five miles southwest of the Agency, and it crossed the Canadian near the Red Hills and Robert Bent's ranch, About forty miles west of the Agency, thence passing up Kingfisher Creek. Chastain wrote to Miles in 1881 to say that he would forward a map of the exact route.¹⁹² The northern extension of the "Arbuckle Trail," furthermore, which passed up Deer Creek to Post Cantonment, was used regularly for every cattle corporation roundup from 1880 through 1883 (except that the cowboys were not permitted to penetrate deeply into the reservation in 1882, by Indian warnings that they were not welcome).¹⁹³

Chastain himself seems to have been acting in good faith. He

recognized the damage to Indian enterprises that could result from the trampling of ill-disciplined trail herds. He therefore requested that Miles send him guides. He was also interested in maintaining the legality of his procedures, urging Miles to repeat his messages to the Indian Office.¹⁹⁴

Whether directly trampled by cattle, or through the efforts of Miles and his successor as agent, Dyer, to remove the Indians from the Washita and Upper North Canadian, it is clear that fields were abandoned. Heavy grazing after abandonment meant erosion.

Even in places that have not been plowed, grazing in northwestern Oklahoma and central Oklahoma leaves as its heritage a living cover that saps soil moisture. At the same time, the remaining cover no longer retards evaporation as efficiently as virgin prairie in which tall grasses are mixed. Further, the structure of the vegetation remaining is such that total transpiration losses are very high. Thus, the soil moisture at the twelve to eighteen inches level is less for grazed pasture than for abandoned fields, where evaporation is virtually unimpeded.¹⁹⁵ Sixty-five percent of the moisture falling upon the region is lost in evaporation.¹⁹⁶

Even where mixed-grass grazing has been carefully moderated, it has left the land very vulnerable to fluctuations in climate. When extremely dry seasons occur, grazed pasture dries out most readily.¹⁹⁷ Further, the soil of even virgin prairie in central-northwestern Oklahoma is dependent on the erosion-retarding effect of the algal strata so vulnerable to livestock hooves.¹⁹⁸

I have, perhaps, been giving the impression that the Washita and

Upper North Canadian areas were primarily valued for their agricultural potential by the Indians. Certainly, the potential was important.

There were, however, other advantages to these areas. When John Seger was invited to White Shield's camp on the Upper Washita in 1882--along with the Cheyenne leaders Red Moon, Stone Calf, and Little Robe--"wild turkey was the standard meat." 199

The Indians of the Washita hunted the turkeys on horseback.

Turkeys were driven from canyons into the open, where trained ponies could pace them in their fitful flights, until the flights were low and slow enough to permit the Indians to whip the turkeys from the air. Indians judged their ponies to a large extent upon their intelligence in pacing the turkeys and wearing them down.²⁰⁰

Ironically, it was the idea of Central Superintendent Nicholson in 1887, that it would be good for the Indians to turn to cattle herding in order to divert them from their nomad's preoccupation with horse raising.²⁰¹ Actually, besides their continuing value as means of production, the horses were in great demand for teamster work and for sale to settlers moving west, or homesteading in surrounding territories. Whites requested licenses to graze horses on the Canadian, and John Seger had a profitable little horse ranch 50 miles west of the Agency.²⁰²

The worst part of the entire cattle ranching affair, as the federal government saw it, was that it imported a regime of enclosure upon the public domain, and Indian lands in particular. Subdivision, or allotment, is always an evil accompanying enclosure. The final roundup on the reservation, before all leased land was enclosed, was understood

by all involved to be the end of Dale's "broad range." This was the spring roundup of 1883, decided upon by the Southwestern Cattlemen's Association (interlinked with the Cherokee Livestock Association) in 1882.²⁰³

The Cheyenne and Arapaho Cattle Company had already begun enclosure in 1879. It was incorporated under Texas laws in 1878, and Miles tolerated its contracts with Indian individuals, but, in conformity with Interior Department policy at the time, he had not permitted the Company to attempt to deal with representatives of the tribe as a whole. Nonetheless, it acquired lease rights to a large territory on the western margin of the reservation (it refrained from intruding greatly on the occupied areas). It then proceeded to subdivide and sublease the land in fenced "districts."²⁰⁴ The subcontractors, like the Austin Cattle Company, were the most recalcitrant of the cattle companies to the dictates of 1885 removal orders.²⁰⁵

The whole business was beginning to leave a bad taste in the collective mouth of the United States Senate by May of 1885:

It is a fact generally well known that the occupancy of lands in the Indian Territory by white men for grazing cattle, even under such licenses as constitute them simply tenants by sufferance upon assigned lands, and the occupancy also of certain unassigned lands for the same purpose, the title of which lands is in the Government of the United States, has been regarded as a sort of precedent under which persons proposing to become actual settlers have sought to acquire homes upon such unassigned lands, which are commonly known as the "Oklahoma country." These pretensions have invariably been resisted by the National Government. The subject is now being investigated by the Senate Committee on Indian Affairs.²⁰⁶

Even as the cattlemen were being evicted, Captain Lee received a hopeful

letter from a boomer, asking whether the soldiers or "poleace" would "molest" homesteaders if they came into the country.²⁰⁷

The Interior Department, in recommending formal leases to Agents, attempted to avoid the generation of liens on government land by stating the condition that no permanent improvements should be placed by the cattle corporations on the land.²⁰⁸ Of course, the condition was ignored in practice. Most corporations were able to remove their buildings and corrals to Kansas or Texas, like the Standard Cattle Company.²⁰⁹ The Cheyenne and Arapaho Cattle Company burned their buildings on Quartermaster Creek.²¹⁰ The Department of the Missouri ordered Lee to let the cattlemen burn their buildings, so that no liens could ever be claimed.²¹¹

It remains only to consider how representative of the whole reservation population were the Indian signatories to the leasing contracts. How much did the Indians want the cattle ranchers in their territory in the first place? In the introduction, I pointed out that only 1 of the signers was an agricultural band leader in 1884 (excluding the mixed-blood Robert Bent). I pointed further to the fact that most of the signatories were identified with the Darlington area, which was the only area not leased. Only tendencies can be discovered, however. A statistical exercise may serve to lend to such attributions a cautionary note.

In Table I, the Odds Ratio²¹² is calculated for four contingency tables. Leasing advocates and agricultural band leaders are cross-classified with their area of 1891-1892 allotment choice in Ia, and with successful vs. unsuccessful attempts at matching them with

TABLE I

CROSS-PRODUCT("ODDS")RATIO($\hat{\alpha}$):AGRICULTURAL FACTION vs. LEASING FACTION

		a.		
		Region of Allotment Choice		
		Unleased	Leased	
Leasing Faction(Leaders)	10	5	$\hat{\alpha} = \frac{10/4}{5/8} = \underline{3.97}$	
Farming Faction(Leaders)	4	8	$\hat{\alpha}_{(w)}^2 = \hat{\alpha}^2 (\frac{1}{10} + \frac{1}{4} + \frac{1}{5} + \frac{1}{8}) =$	$\underline{7.29}$
		b.		
		Success in Matching(Ration Band Lists/Allotment Rolls)		
		Not Matched	Matched	
Leasing Faction(Leaders)	2	15	$\hat{\alpha} = \frac{2/5}{15/12} = \underline{.32}$	
Farming Faction(Leaders)	5	12	$\hat{\alpha}_{(w)}^2 = \hat{\alpha}^2 (\frac{1}{2} + \frac{1}{5} + \frac{1}{15} + \frac{1}{12}) =$	$\underline{.09}$
		c.		
		Region of Allotment Choice		
		Unleased	Leased	
Leasing Faction(Members)	25	24	$\hat{\alpha} = \frac{25/22}{24/41} = \underline{1.93}$	
Farming Faction(Members)	22	41	$\hat{\alpha}_{(w)}^2 = \hat{\alpha}^2 (\frac{1}{25} + \frac{1}{22} + \frac{1}{24} + \frac{1}{41}) =$	$\underline{.52}$
		d.		
		Success in Matching(Ration Band Lists/Allotment Rolls)		
		Not Matched	Matched	
Leasing Faction(Members)	54	59	$\hat{\alpha} = \frac{54/51}{59/63} = \underline{1.06}$	
Farming Faction(Members)	51	63	$\hat{\alpha}_{(w)}^2 = \hat{\alpha}^2 (\frac{1}{54} + \frac{1}{51} + \frac{1}{59} + \frac{1}{63}) =$	$\underline{.09}$

Sources: CAA, File "Councils(Volume);" "Memo: For Statistics 1884;" "1st Quarter Cheyenne Enrollment, 1882;" "2nd Quarter Cheyenne Enrollment, 1884;" CAA, File "Enrollment Lists and Census Rolls," OHSAMD; Cheyenne and Arapaho Allotment Rolls.

persons indicated on the allotment rolls, in Ib. Ic and Id are for all members of the 1884 ration bands of the signatory and agricultural leaders. Whirlwind band is excluded because Whirlwind signed only one of the contracts. Elk Horn(s) is not a leader on any ration band list available to me. Four of the signatory leaders are not on the 1884 list, so their bands are taken from the 1st Quarter 1882 list. It should be cautioned that membership in ration bands were often variable from quarter-to-quarter as well as from year-to-year (see Table II).

The odds on Darlington allottees having been signers is ten to four, and that of non-Darlington allottees is five to eight. The ratio of the odds should approximate one closely if the odds are not associated. Actually, the Odds Ratio is 3.97. The variance is relatively large, however, 7.29. Furthermore, for types of leaders, the Odds Ratio for success in matching shows strong association, with relatively little variance. Hence, the results may reflect the pattern of matching success more than genuine areal preference. Considering followers as well as leaders, differences in allotment area choice is seen to be in weak association with type of leader followed, but the variance is sufficient to prevent reposing great confidence in the existence of any actual association between the variables cross-tabulated. On the other hand, matching success is not associated very strongly at all with type of leader followed, and the variance is negligible.

TABLE II

EXAMPLE OF QUARTER-TO-QUARTER, YEAR-TO-YEAR
VARIATION IN RATION BAND MEMBERSHIPS

Bull/Wolf Robe Ration Band

Fourth Quarter 1881 Extended Family Heads

Bull
Little Old Man
Medicine Bear
Old Sioux
Roman Nose
White Thunder
Wolf Robe

First Quarter 1882

Bull
Wolf Robe
Soft Nose
Medicine Bear
Medicine Bull
Red Shin
Cut Foot

Second Quarter 1884

Wolf Robe
Bull's Family(Bull Deceased)
Soft Nose
Tall Pawnee
White Scalp
Scabby Bull(female family head)

(Wolf Robe and Bull were both signers of the 1882 Petition for Leasing, and all the 1883 leasing contracts.)

Sources: "Fourth Quarter 1881 Enrollment;" "First Quarter 1882 Enrollment;" "Second Quarter 1884 Enrollment;" CAA, File "Enrollment Lists and Census Rolls," OHSAMD.

6. Recapitulation

This chapter has attempted to show how the Cheyennes came to be on their Oklahoma reservation, and how they tried to shape it, a process distorted by Brinton Darlington's misjudgement. An objective factor was sought in the malarial regime for sedentary trends. Finally, the natural subdivision of the reservation through ecological adaptation was shown to have been subverted by the geopolitics of the large-scale cattle industry.

Questions of good and bad faith on the part of cattlemen, government officials, and Indian leaders have been largely avoided--though there remains a strong hint that Indian signers of the 1883 leases were simply giving away part of the reservation in which they had no interest. Essentially, however, the historical circumstances show of how little importance any amount of good faith and good intentions are in the face of geopolitical and ecological facts.

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CHAPTER IV

FOUNDATIONS OF CHEYENNE AGRICULTURE IN WESTERN OKLAHOMA

Except in the best years, the critical margin of tolerance is so small in Plains agriculture that only those possessing both the skills and the managerial ability can have a reasonably safe chance of success. Peculiarly it is more conspicuously in the field of political adaptation that the plainsmen have failed...

The power to carry through an undertaking is an important point to stress—to inaugurate innovation, whether for good or ill, when new hands seized control and finally to strangle change. The individual, the private organization and the public agency are equally ruthless in their instinct to retain power, but the three are different in their ability to defend their entrenched position when in control.

--James Malin, Winter Wheat, p. 252.

1. Chapter Preface

Many Cheyenne groups carried traditional agricultural practices with them into the situations of reservation and allotment. The first effort of this chapter will be to try to estimate their affect upon agrarian development. Not a great deal can be made of this matter. The facts are not easy to obtain, and the Indians do not give much evidence of having been tradition-bound, in the sense of stubbornly resisting innovations. The next direction the chapter will take is one of return to the agricultural situation on the reservation, as agent Miles left it. Since Miles had no great faith in aspects of husbandry other than livestock-raising, it would not be expected that crop-raising would have

been greatly advanced under his direction.

Miles' successor as agent, D. B. Dyer, was more competent in matters of husbandry. He saw limitations on the amount of livestock that could be supported on reservation grasslands, and made the critical connection between success with livestock and the growing of adequate feed crops. Under Dyer's administration, significant reforms were begun, which would be extended by his successor, Captain Jesse Lee.

As Acting Agent from August 1885, through August 1886, Lee put through a radical reform of the entire reservation scheme. The basis for what became the reservation farm districts, and system of sub-agency authority areas, was established through a process of attempting to give Indian communities status as "colonies," cooperative agrarian settlements. This endeavor was based not only upon a recognition of the continuing importance of traditional Indian leaders and tribal subdivisions, but also upon a recognition that cooperation in farming would make optimum use of scarce capital.

Then, I will digress from the narrative historical context, in order to contrast the rationing of capital through a cooperative scheme, with capital rationing as it developed under trust authority after allotment in severalty. The attempt to create a regime of self-sufficient, dispersed Indian farms, based upon individual Indian trust accounts, will be shown to be economically irrational, in the sense of ignoring budget constraints on Indian agricultural development, and encumbering transfer of capital among Indians.

I shall then evaluate the innovations of the Lee administration, discussing the fate of these innovations as managed by Lee's successors

as agents. Lee's successors desired a decrease in the degree of nucleation of Indian settlements that Lee had encouraged. They were intent upon dispersing the Indians into independent family farms, in order to prepare the way for allotment in severalty.

The last major set of circumstances to be addressed concerns the Indians' selection of allotments, and their lack of success in the year immediately following allotment. This will be put into the context of western Oklahoma agriculture during the period of the severe national agricultural depression of 1892-1896.

2. Traditional Agricultural Practices, and the Prelude to Agricultural Colonization

The Cheyennes carried agricultural traditions with them into the reservation and allotment setting. Kias (Bear Shakes Plants), a leader of the Bow String Warrior society, and one of the Cheyenne pioneer agriculturalists of the original Seger Colony on the Washita River in 1886, recalled the presence of traditional practices in Cheyenne farming during the breakthrough year of 1876:

Among those given a garden tract was my grandmother, who was a widow. When she planted corn and watermelons she would put a handful of seeds in each hole. She would first soak the seeds in a bowl of water sweetened with sugar. "The fruit will be sweeter then," she explained.

The corn and melons came up thick, but the corn₁ did not make. The melons did, and they were sweet.

The 1876 agricultural development was linked by agent Miles with the authority of Big Horse, but Kias' group was not closely related to that of Big Horse. Kias' group was brought in from the Upper Washita in

1875; they had not gone north to fight with the Northern Cheyennes.

The rejection by the Cheyennes and Arapahoes of lands north of the Cimarron River in 1869, was partly based on the salinity of waters in that region, as I related in Chapter III. Another reason, however, given to the military authorities at Camp Supply, derived from a specific agricultural appraisal. The Indians stated that the soil often took on a "snow-like" quality.² What the Indians were referring to was the phenomenon of "drifting" of upland soils in western Oklahoma, a matter unrecognized by non-Indians until 1896, and a problem not taken seriously by non-Indians until 1901.³ From the first, the Indians were concerned about the character of reservation agricultural potential.

Long after allotment, some Cheyenne and Arapaho agents and district farmers found Indian agricultural traditions bothersome. For instance, Red Moon Superintendent and Special Disbursing Agent, Willis Dunn, complained, in 1913, that his Cheyenne charges were insufficiently interested in his experiments with new crops and plant varieties. Instead, they preferred to concentrate on a strain of "squaw corn," which the agent described as follows:

It is a native crop grown by the Indians for several generations and recommended for its extreme hardiness and drought resisting qualities and it is the purpose of the Superintendent to breed up this variety and induce the Indians to plant the improved strain.⁴

I have no idea what particular variety of maize was actually being referred to. More importantly, I cannot be quite certain which "Indians" had maintained it as a tradition for several generations.

For instance, the half-white Wichita Indian John Hansell was married into White Shield's camp at Red Moon Agency, and the Wichita are

the oldest surviving group of agriculturalists in the Oklahoma area.⁵ A special agent's report on the membership of White Shield's camp in 1915, however, indicates that Hansell was primarily employed as a blacksmith. His main agricultural commitment was to raising forty acres of alfalfa as a feed crop, attendant upon his ambition to become a raiser of livestock.⁶ Where the Red Moon Cheyennes originally got their variety of corn to raise, cannot be adequately determined.

In any case, the Red Moon Cheyennes were not stubbornly committed to any single strain of maize. At the Beckham County Fair in September 1915, two Cheyenne men (married into White Shield's camp) received "premiums" for their varieties of seed corn. These two varieties were discriminated with marvelous specificity as a "yellow" as opposed to a "white" strain. Darwin Hayes earned a premium for his "yellow" corn, Bryan Flacco for his "white."⁷

It would be a mistake to say that the farming traditions of one Cheyenne group were the traditions of the Cheyennes in general. When the Cheyenne Thomas Otterby (originally a Bridgeport/Geary district allottee) was assistant district farmer at Kingfisher, he had reason to complain of the Cheyennes there that "they do not listen to my advice, they have their own ways of farming."⁸

The fact that farming customs existed does not mean that the Indians had an adequate base for agricultural advancement. New economic and ecological circumstances may make traditional practices liabilities. Charles Loneman, of the Greenfield Arapahoes, sought to speak for both Cheyennes and Arapahoes in a letter to the Commissioner of Indian Affairs, in 1920:

Principally the Indian understands a little about farming. But have his own way and no one to show the properness. But my principal idea is to offer my free service to the Indians in showing them and correct them.⁹

Captain Jesse Lee, chief architect of the agrarian settlement pattern of the Cheyennes and Arapahoes, wrote in 1886 of the chances for Indian survival with the advent of "civilization." He thought that the Arapahoes would die out, because he believed that they too readily accepted any idea or innnovation suggested by white men, no matter the degree to which the idea was adaptable to their concrete circumstances. The Cheyennes, in Lee's opinion, had a better chance, because "They are more tenacious of Indian rights and customs, and are more apt to ask for reasons, and discuss the merits of proposed changes. Where they move in the right direction, they do so with vim and energy."¹⁰ This was a libel upon the Arapahoes. The general principle, however, was sound. Unless there are traditions to build on, a foundation for orderly development, nothing lasting can be built. If traditions are stubbornly clung to, without modification throughout changes in the general environment, again no progress is possible.

Whatever customs of agriculture and settlement were brought by the Cheyennes into the reservation context, they became inextricably bound up, during Captain Lee's administration, with Lee's own conception of a viable agrarian settlement pattern. Nothing, of course, was very original to Lee himself. The Army Department of the Missouri had a tradition of plains agriculture dating back to the intensive farming that took place at Fort Atkinson in Nebraska during the 1820s.¹¹

Important innovations in western Oklahoma agriculture were first

introduced at Camp Supply in the late 1870s. An elaborate drainage system was begun in 1877, for public health reasons, as well as to promote farming threatened by excessive rainfall and flooding. In 1880, the new post windmill began to be used successfully to irrigate the crops grown by soldiers. Of the 120 Cheyennes and Arapahoes enlisted in the Army in 1885, to guard the reservation from white incursions, forty "scouts," along with their families, were stationed at Camp Supply, where they were required to enter into the agricultural life of the fort community.¹²

It is curious to note that Cheyenne and Arapaho Agent John Miles reported, in 1881, that the sandy soils of northwestern Oklahoma prevented any effective control of runoff, or diversion of waters for irrigation.¹³ It is difficult to believe that Miles was unaware of the successful practices at Camp Supply. Miles never seems to have believed that agriculture could be successful in northwestern Oklahoma. By 1883, many Indian farmers had been reduced to sharecroppers. They were allowed to rent small parts of the single, 100-acre Agency farm, for one-third of their crops. Indians who wanted to start or maintain farms of their own, had to buy their own seed from traders.¹⁴

Given these circumstances, it seems hardly fair that Miles' successor as agent, in 1884, D. B. Dyer, should have spoken scornfully of what Indians "call farms, consisting of from one-quarter acre to 10 acres."¹⁵ Dyer, however, had neither so negative an attitude toward agriculture, nor so sanguine an attitude toward Indian cattle raising, as Miles had maintained. Dyer recognized a number of things about the cattle business that managers of large cattle corporations in the

reservation area were refusing to realize in the early and middle 1880s. He saw that as many as twenty acres of pasture per head of cattle needed to be provided. He also realized that the Indians would have to become growers of feed crops on a fairly large scale, if their cattle were to be properly maintained through the winters of the region, usually mild, but often severely cold after dry summers.¹⁶

In his 1885 Annual Report to the Commissioner of Indian Affairs, Dyer complained that the "outlaw bands" of Stone Calf, Little Robe, and Spotted Horse, along with the "Dog Soldiers," were retarding Indian progress. One of Dyer's chief complaints was that the "outlaws" were seizing or destroying fencing, and burning the cattle range. He was careful, however, to imply that such destruction of enclosures, and burnings, were confined to government property, or to the property of "friendly Indians."

It is true that the Cheyennes of Cantonment destroyed or seized fencing of cattle corporations occupying the reservation under color of lease. As I related in section 5 of Chapter III, the Indians were within their legal rights to do so. The Cantonment Cheyennes also fired the range at times, but this was generally a defensive, not an aggressive action, at least in the determinations of military authorities in the area.

The issue was the boundary between the reservation and the Cherokee Outlet that bordered the reservation on the north. The Cantonment Cheyennes often complained to the military authorities in the early 1880s that seasonally, Cherokee Outlet cattlemen were moving their herds onto reservation lands. When the military tried to take action on the

complaints, however, the cattlemen demanded official surveys to establish the exact location of the boundary. By the time such a survey could be undertaken, the cattle, of course, had all been carefully removed well back into the Outlet. By 1885, the frustrated Cheyenne in the area began burning the range where they thought the legal boundary to run.¹⁷

John Seger thought that Dyer was merely a tool of the cattle corporations. Seger personally consulted with Wolf Robe about the supposed complicity of the Indian military societies in raids upon government property. Wolf Robe told Seger that there were 250 Cheyenne and Arapaho children in eastern schools. The military societies, traditional keepers of peace within the tribes, considered these children as hostages to their good conduct.¹⁸

Whatever the full truth of these matters, it is certain that Dyer's actions as agent in the area of agricultural development constituted a great improvement over Miles' policies. He reported, in 1885, 584 acres of crops cultivated by full-blood Cheyennes on their own farms (500 acres by full-blood Arapahoes). This expansion was largely the result of provision of seed at government expense, and the breaking of 600 acres of land by professional sodbusters under government contract. Another 600 acres were reported to have been broken out by the Indians themselves. For reasons that I shall explain later, it is unlikely that the non-professional breaking was of any great value. Perhaps the most important innovation, under Dyer, was the introduction of winter wheat, and a request for a threshing machine that could be used to produce wheat seed, and seed from oats crops.¹⁹

In July of 1885, Captain Jesse Lee, Ninth Infantry, relieved Dyer as agent. This was not an Interior Department appointment, but one of direct Presidential orders.²⁰ The cattle corporations would be evicted, and the reservation belonged to the Indians again, for a brief time.

3. Colonization and Capital-Rationing

In a letter to a Special Agent of the United States Department of Agriculture, who was working out of the Sac and Fox Agency in Indian Territory, Lee gave the following figures for Cheyenne and Arapaho husbandry accomplished in 1884:

	<u>Cheyennes</u>	<u>Arapahoes</u>
Horses	1283	1019
Mules	20	16
Swine	125	32
Fowls, Domestic	150	380
Hay Cut	150 tons	200 tons
Corn	900 bushels	2000 bushels
Potatoes	0	300
Melons	uncertain	uncertain
Pumpkins	uncertain	uncertain

Of the other items queried about, no wheat was harvested, no oats, no barley, no rye, no buckwheat. There were no sheep kept.²¹

Lee's most immediate concern in August of 1885, was the promotion of winter wheat. Over 1000 bushels of wheat had been stacked by the Indians. Lee pressed for early purchase and delivery of the threshing machine requested by Dyer, so that seed would be ready for fall planting. A steam thresher, Lee wrote, was desirable so that it could be moved readily from one reservation area to another, rather than being confined in its use to the Darlington vicinity, as other agricultural

innovations had been.²²

Dyer's request for a thresher had met with Indian Office resistance, the Commissioner of Indian Affairs stating that Indian Office policy was "averse to purchases of labor saving machines; but an estimate for flails will receive action." Lee asked to be informed if Indian Office policy was deliberately designed to retard Indian agricultural development.²³

Both cutting and threshing harvest operations were highly mechanized activities before the first major non-Indian settlement of the Great Plains in the 1870s. Capital-poor homesteaders in the region often had to resort to having draft animals tread out the grain, but flailing was rarely practical. The timing of harvest activities in an area of abrupt changes in weather was very critical to farm success.²⁴

Lee set out to determine what the Indians themselves wanted to do with their reservation. He called a conference for the 26th of August, making sure that Stone Calf, Little Robe, and Spotted Horse came, as well as the Darlington area Cheyenne and Arapaho leaders. The Arapaho leaders, Powder Face, Left Hand, and Tall Bear, generally expressed their satisfaction with the removal of the cattle corporations, because they were interested in expanding the range of their own cattle herds.²⁵

The Cheyenne leaders deferred, at first, to Stone Calf as speaker. Stone Calf noted with pleasure that the United States finally had a President who seemed to agree with his own opinions of the range cattle industry. Stone Calf denied all Cheyenne interest in cattle raising, stating that he had fired the range to keep the cattle away from his own camps. Agriculture was a different matter. Stone Calf wanted the

government to hire professional sodbusters to increase cultivable acreages. He demanded also that the government build "houses," but he did not conceive of houses as dwelling places. He wanted structures to store corn in. Since game and timber in the Darlington Agency vicinity had been subject to heavy depredation, Stone Calf wanted the agency moved to Cantonment. He demanded better protection for the game and timber in the Cantonment area. He said that he would send his children to school only if the Cheyenne School at Cantonment was made to function as well as the Arapaho School, which was operated at Cantonment by Mennonite missionaries.²⁶

On the 29th of August, Little Big Jake, Little Medicine, Cut Nose, Howling Wolf, Cloud Chief, White Antelope, and Red Wolf, Cheyenne leaders, requested a chance to say something without Stone Calf's authority bearing down on them. These men thought that Stone Calf's policy was a "do-nothing policy," and that the Mennonite missionary leader at Cantonment, S. S. Haury, was in complicity with Stone Calf (an opinion made explicit by Little Medicine). These leaders wanted an active role in all steps taken by the white administration. They did not feel secure in demanding reforms, and then sitting back to see if they came about.

Actually, there was little substantial disagreement with Stone Calf's position. They expressed no interest in going into the cattle business. They demanded plows, corn planters, and mowing machines. Their most basic complaint about most Cantonment Cheyennes was that they did not do their share of freighting reservation supplies. The Darlington Cheyennes did differ with Stone Calf on one major point:

they thought they could do their own breaking, if given breaking plows.²⁷ Cheyennes, for instance Big Horse, who were interested in the cattle business, do not seem to have been represented at these conferences.

On the basis of these conferences, Lee recognized that Dyer's estimates of agricultural means of production required for both fall 1885 and spring 1886, were too low, with respect to Indian demand. He requested more implements, more seed, and more fencing material.²⁸

Lee broached the idea of decentralization of administration, suggesting the establishment of Cantonment as a semi-autonomous "sub-agency." About 300 Indians were already permanently located near Cantonment, and another 300 Cheyennes or more, under Stone Calf and Little Robe, were demanding to be allowed permanent residence rights there. "It may be convenient," Lee stated, "in a certain sense for an agent to have the Indians crowded around an agency, but certainly not always beneficial to the Indians."²⁹

Since Post Cantonment had been abandoned by the military, its sounder structures could be utilized for school, commissary, and workshop purposes. Lee further proposed to have timber salvaged from the more dilapidated buildings and turned over to the Indians for building houses.³⁰ This idea of using improvements left in place by various groups, especially those left by the cattle corporations, to help found colonies, was to be an important one in determining the distribution of settlement sites in the reservation area.

In late September, Lee went to Cantonment to attempt to visit all of the estimated fifty lodges of Cheyennes that constituted the bands of Stone Calf and Little Robe. The general outlook for Cantonment was not

terribly bleak. Fifteen Indian families were already living in houses; the Indian cornfields were well tilled, free of weeds. The conferences with Stone Calf and Little Robe, and the direct contacts with most of the families under the influence of those two leaders, were immediately profitable. Stone Calf and Little Robe personally accompanied thirteen Cheyenne children to school on the 25th, and organized an eleven-wagon train to go upon the freight road from Cantonment to Caldwell, Kansas.³¹

Lee's problems were just beginning. In September, he tried to act upon Stone Calf's complaint that Tristram Connell's trading store at Cantonment was charging exorbitant prices. Lee requested on September 29th that the Indian Office take steps to regulate the profits of licensed traders.³² Receiving no action on this request, Lee resorted to warning the traders that the Indians owned the land, and had liens on all the property of traders on the reservation, so that the traders should reconsider their excessive credit interest charges.³³

The Indians had hauled 500,000 pounds of supplies by the first of October, but white thievery of Indian livestock had forced the Indian freighters to re-use the same sets of ponies or mules to the point of complete exhaustion. Furthermore, fall rains made the Cantonment-Caldwell freight road virtually impassable, especially in the vicinity of Pond Creek.³⁴

The Indians needed additional financing for their freighting. Lee had no appropriated funds to procure wagons and harness to outfit four-horse teams, but he worked out an "unofficial" deal with the Caldwell forwarding agent, J. A. Covington, whereby the Indians could purchase the outfits from appropriations designated for Indian

freighting. Among the Cheyennes who wanted this deal were Chief Killer, Yellow Calf, Walking on the Ground, and Eating Wolf. The only trouble was that the money to pay for freighting accomplished was appropriated, but not on hand. Lee, therefore, urged the Commissioner of Indian Affairs that the Indians could not be expected to give the BIA credit for work accomplished, so that the funds must be quickly transferred to the agency. That the money, of course, was actually going to help the Indians buy wagons and harness on credit was not mentioned to the Commissioner.³⁵

This interesting piece of duplicity necessitated the introduction of winter wheat to Cantonment, presumably in order to provide pasture, or free other crops, for feeding working teams. The same day that Lee wrote the letter on credit to the Commissioner, and a different message on credit to the forwarding agent, Lee fired off a frantic message to S. S. Haury at Cantonment, asking him whether he could plant twenty acres to wheat.³⁶

While Cantonment was struggling to establish itself, Lee was already, in October of 1885, laying out plans for colonies in the southwestern reservation area. He inspected the Boggy Creek area, near the location of the present-day town of Bessie in Washita County. He had little hope of locating Indians there before the spring, but the presence of cattle corporation improvements in the area was thought to be advantageous.³⁷

The Cobb Creek area to the west of the Bessie site elicited more enthusiasm from Lee. He wanted the Indian Office to buy up the fencing left there by the Washita Cattle Company. Lee thought that much of the

fencing could be left standing, in order to establish a good pasture commons for the Indians. He wanted John Seger to supervise the colonization, Seger having proven his abilities by making the Darlington manual training school a self-supporting industrial and agricultural operation in the late 1870s.³⁸ The idea of creating pasture commons, and grouping Cheyenne farms around commons, was to be important in Lee's planning.

Meanwhile, the Cheyenne School program at Cantonment was not prospering. Lee and Haury were still struggling to make the Cheyenne authorities understand what was necessary to give Cantonment some autonomy. The Cheyenne leaders, for instance, seemed to think that it was necessary only to have one child from each camp sent to school. Lee wrote to Haury that "Every Indian that is holding back in this school business is doing just what his enemies want him to do."³⁹

The most common policy exercised by BIA officials was to withhold all rations from Indian families who refused to send all their school-aged children to school. Lee considered such policies "objectionable," and refused to use his authority in such a manner.⁴⁰ Instead, Lee directed Haury to begin to cultivate the Dog Soldier leadership, White Horse most prominently. He cautioned, however, that Stone Calf and Little Robe could not simply be passed over in policy decisions.⁴¹

A serious complicating factor was the Indian Office mode of accounting for ration issues. Readily subdividable materials did not cause any problem, but cattle were usually issued on the hoof, one beef



for every forty Indians each week. The groups of forty were called "bands" ("beef bands" or "ration bands"). The Indians preferred on-the-hoof issues to issue from the butcher's block, and on-the-hoof issue had many advantages for them. The Indians typically ran down the issue cattle on horseback. The point of this was to increase cattle blood pressure ("heat up the blood"). The Indians then tried to kill the animals with one shot in the main artery area, so that the blood could be drunk easily and not wasted or spilled on the ground in butchering (such waste would have undoubtedly drawn more flies). Moreover, the movement of horses and cattle disturbed gophers from their mounds. These gophers were killed by the Indians, and loaded into their wagons along with the cattle meat.⁴²

Rodents of all kinds became increasingly important subsistence items for the Cheyennes, as wild turkey and other game became more scarce in the late 1880s, and in the 1890s. After the opening of the central part of Oklahoma to white settlement in 1889, the Cheyennes of Kingfisher often offered their services to homesteaders in eliminating rabbits, which Indian women hunted in group drives.⁴³ BIA rations alone never adequately fed the Indians.

Nevertheless, the rations could make the difference between starvation and survival. By 1885, almost all Arapaho camps, and most of the Cheyenne camps in the Darlington area of the reservation, had evolved informal systems of grouping and re-grouping so that the forty-member sets required for "beef bands" could be accomplished without troubling BIA bookkeeping. In 1886, camps of the pioneer colony under John Seger's direction never seemed to have great difficulty

combining for ration issues. Since the colony had only two Cheyenne camps originally, that of Little Medicine and that of Bob Tail, the pattern of combination was fairly obvious at first.⁴⁴

Many Cantonment Cheyenne camps had often resisted taking rations before 1885.⁴⁵ The Cheyennes refused to jeopardize the orderly structure of their camps by fiddling with combinations into forty member ration units. The Cantonment Cheyenne camps, in November of 1885, ranged in membership from thirteen to thirty-six in numbers, the median number being twenty-four, and eleven of the fifteen camps ranged in numbers of members from twenty to twenty-eight.⁴⁶

It was hoped that the great authority of Stone Calf could be enlisted in ordering the Cheyenne camps into temporary ration units. Stone Calf himself had participated in, as well as organized, freight wagon trains in September and October of 1885.⁴⁷ Little Robe was a veteran freighter by this time, so his participation was hardly surprising. Lack of participation by the Dog Soldier leader, White Horse, seems to suggest resistance by that element of Cantonment society in the fall of 1885, to any cooperation with the white administration. White Sun and Flying Hawk, whose names were linked with that of White Horse, also did no freighting in the fall of 1885. The full list of Cantonment freighters was of the following Indians: Black Crow; Mower; Bob Tail Horse; Black Hawk; Big Bear; Black Rock; White Shield (not the Upper Washita Cheyenne); Spotted Horse; Standing Wolf; Stone Calf; Little Robe; Catching; Sitting Bull; Left Hand; Little Raven; Deaf; Warpath; Rabbit Run; Scabby Horse; and Coming-on-the-Road.

Hope in Stone Calf's leadership was dashed by the old chief's death

in November of 1885, and Little Robe's subsequent withdrawal to the Washita River with his camp of two or three lodges. Lee told Haury that they would have to find a way of convincing White Horse to assume overall authority and "Get Cheyennes in bands."⁴⁸

To make matters worse, white arsonists struck at Darlington Agency and Cantonment pastures in November, to stampede the agency herds. Large numbers of cattle were not recovered (hence the inference to arson).⁴⁹ With the ration herds reduced, Lee was forced to direct Haury to give preference in beef issues to Cheyenne camps that had at least one child in school. If sufficient beef could be made available, however, all camps were to receive issues at Cantonment who so desired.⁵⁰

This hardly gave the Cheyennes an increased incentive to form their camps into ration bands at Cantonment. The Cheyenne Flying Hawk, and the Arapaho Standing Rabbit, chose to withdraw their camps to Salt Creek, where there was still good pasture for their pony herds.⁵¹ By the end of December, Lee had to tell Haury to send camps with no children in school back to Darlington to receive rations.⁵² Cantonment seemed to be falling apart.

Lee, therefore, in December, began to evolve another plan of juggling accounts in order to fit the Indians' disposition. He argued in December to the Commissioner of Indian affairs for dispersing issue cattle to graze near the evolving colonies, because of the destruction of Darlington pastures. He further insisted that, in some cases, given the loss of animals, and fluidity of general circumstances, it would be more convient, in some cases, to issue cattle only every other week.⁵³

Meanwhile, White Horse remained suspicious of Lee's intentions toward Cantonment. The sending of some camps back to Darlington for rations hardly quieted his fears.⁵⁴ In February of 1886, Little Chief, a settler of what Lee called the "North Canadian" district (later called "Twelve Mile Point" and "Calumet" District), was prevailed upon to use his influence over White Horse. Further, White Horse was favored in being allowed to continue drawing rations for his camp at Cantonment, free of school-related requirements.⁵⁵ These actions payed off; by late February the Cheyenne camps at Cantonment assembled in groups approximating ration unit numbers.⁵⁶

On the whole, the fall of 1885 was not unlucky for Lee. He got his steam thresher in October, in time to thresh out seed to plant a winter wheat crop. Lee had been having the wheat tramped out, a process too slow to meet Indian demand for seed.⁵⁷

January of 1886, was largely taken up with the repair of old machines that previous agents had allowed to go out of operation because parts malfunctioned. The result of such neglect was that most Indians did not have the machinery available in 1885, to harvest sufficient hay to maintain their horses in full strength through the fall and winter.⁵⁸

Slow deliveries through the BIA contracting system led Lee in January to go to the local and Kansas open markets for seed corn, seed oats, potatoes, and millet seed, as well as for apple and peach trees for planting. The lack of tool-sharpening implements, awls and portable forges, for disbursement to colonies, also required open-market purchases. The agency didn't even have a veterinary kit with common horse medicines and instruments.⁵⁹

By early February, Lee had some implements and seed on hand, but he was reluctant to issue them immediately. He feared that the inadequate numbers, given the large Indian demand, would lead to quarreling amongst the Indians, and charges of favoritism against the white administration.⁶⁰ This evaluation proved correct, but issues of agricultural means of production could not be delayed indefinitely.

On the 22nd of February, Lee was able to send Haury ten stirring plows, two harrows, five double sets of plow harness, 920 pounds of seed oats, and twenty bushels of seed corn, with a promise of thirty more bushels to be shipped directly to Cantonment from Caldwell.⁶¹ The Cantonment-Caldwell freight road, however, did not become passable until late March.⁶²

Meanwhile, as Lee had feared, many more Indians desired to farm than could be supplied with implements and seed. Lee requested emergency authority to purchase additional seed on the open market in late February: thirty-six bushels of corn, forty bushels of seed oats, fifteen bushels of seed millet, twenty-five bushels of onions to set, five pounds of watermelon seeds, and two pounds of mush melon seeds.⁶³

Another shortage affecting reservation morale was the scarcity of fencing wire, which was critical to the coexistence of grazing and farming. Lee had requested, in October of 1885, that the Indian Office purchase the 100 miles of fencing left by the Muscatine Cattle Company, which the corporation was offering at a third of original cost. He accompanied this request with a plan for a colony in the area of the George E. Reynolds lease in the northeastern corner of the reservation. Lee thought that much of the fencing of that lease should be left

standing. Setting up pasture commons would have meant a great savings in fencing requirements.⁶⁴

The Indian Office was reluctant to make such large-scale expenditures. Haury could get only seven miles of Muscatine Company wire for Cantonment by the end of January.⁶⁵ Meanwhile, a shortage of nails was impeding Indian progress in constructing horse corrals.⁶⁶ The Indians pressed on with setting posts, but often became discouraged by the lack of wire to protect their crops from trampling.⁶⁷

Lee decided to ask Haury, in March, to urge the Indians to keep their acreages small, so that some fencing, at least two or three strands of wire could be put up around every Indian farm. Fencing of school farms and grazing commons would have to be deferred. Since the Indian Office wanted each Indian isolated on his or her own plot of ground, Lee, rather cynically, told Haury that they could create the semblance of such a situation long enough to allow Lee to "push settlement" for more wire. White Horse, however was to be favored again; he could enlarge his acreage as much as he wanted.⁶⁸

Land breaking, sodbusting, was another sore point. The breaking complex had developed on the Great Plains, as on the eastern prairies, as a very specialized set of skills and implements. The sod plow was a massive iron or steel plowshare, weighing up to 125 pounds, and set on the rear of a beam up to fourteen feet long. Three to seven draft animals, usually oxen, had to be yoked, and the fewer the oxen the greater had to be their training. Further, the plowshare had to be precisely adjusted with respect to the coulter, the sharp wheel that cut the surface in front of the plowshare. Poor adjustment of the plow, or

improper lengths of chain hooking the oxen, led to great difficulty in handling.

Moreover, the seasons of breaking were limited. Spring breaking often permitted the sod grass to root again before fall. Breaking too late in the fall often left too little time before first frost for the sod to rot. Hence, competition for hiring sodbusting specialists was intense in the summer.⁶⁹ This explains my earlier remarks that the 600 acres were wasted that were supposed to have been broken by the Indians themselves in 1885, as Agent Dyer reported. The Indians lacked proper implements, draft animals, and training. Further explained is the lack of major Indian acreage expansion in the late 1870s, under agent Miles.

Miles required, in 1878, that only those Indians who broke some land themselves should have additional acreages broken out for them under contract. Not surprisingly, only 150 acres were broken by the Indians, and 314 by contractors. Miles stated that the Indians would have broken more acreage themselves if more implements had arrived before the end of May.⁷⁰ Since June is a prime breaking month, it would seem that in this case, as in others, Miles either was ignorant of how to farm, or else really didn't care much about it.

In 1886, the Office of Indian Affairs objected to Lee's plan to hire specialists to break in the early summer. The Office was willing to supply the Indians with breaking plows to use in the spring. Lee pointed out, however, that constant white thievery of draft animals made it impossible for the Indians to break the sod themselves. He stated that he intended to pay any Indians who broke for themselves or for other

Indians.⁷¹

Lee's comments on the Indian Office's attitude toward the situation of the Indians, with respect to their property in draft animals, became less and less polite as time passed. In early March, he wrote to the Commissioner of Indian Affairs as follows:

Last fall an old Indian and his squaw—having lost by theft it is believed, all his horses, put in his wheat by dragging a bush over the ground.

The Govt. has promised to re-imburse these Indians for such losses, a promise that, to my knowledge, has never been kept.⁷²

This, incidentally, is the earliest reference that I have found to a primitive harrowing practice amongst the Cheyennes or Arapahoes. Grinnell mentions no such practices as being part of the Cheyenne agricultural tradition.⁷³

By May, Lee was attacking the Indian Office for wasting his time by asking him to investigate white men's claims of horse stealing by Indians. He stated that "If any Indian has stolen a pony in the last two years, whites have stolen ten to it." He pointed out some more examples of white horse-theft, as it affected Indian agricultural development:

Last winter a crippled Indian known as "Lame Antelope" selected his farm, cut and hauled his logs to the mill, and with some assistance built himself a comfortable house and moved into it. The most of his earthly possessions consisted of his house and two ponies. He put up hay and by great care succeeded in getting through the winter in fair condition. He was just getting ready to haul posts to fence his farm preparatory to plowing, when he was robbed of his best pony by some white horse thief.

The majesty of the law is to the Indian mind a complete farce—an absolute nullity--so far as any protection the law gives him in these matters.⁷⁴

Nevertheless, Lee did cater to Indian Office whims as much as he had to, ordering, with a fine display of appreciation of the need for quick deliveries, additional breaking plows for the Indians in March. He was forced to let the Indians try to break for themselves as early as March. Lee regretted seeing that "Several Indians are breaking their own land with their skeleton like ponies, stopping every few rods, resting and then pushing on."⁷⁶

Meanwhile, Lee was entertaining "informal" proposals for breaking, from specialists at Caldwell, Kansas, setting April 9th as a tentative starting date for the operations.⁷⁷ As inquiries came in from professionals in March, Lee replied that he would be able to give them extensive work later on, "during the breaking season."⁷⁸ As it turned out, competition for sodbusters in the reservation vicinity was intense, so that the professionals could not meet the April 9th starting date. Lee replied that weather conditions seemed to be good enough to permit contractors to catch up later.⁷⁹

Some Indians, notably Wolf Robe, did break out land and make farms for other Indians, and Lee began paying them in March. The Commissioner of Indian Affairs was shocked to learn that such a person as Wolf Robe was being encouraged in any fashion, since Wolf Robe was married to more than one woman, and was also a member of the dread Dog Soldier society. Lee replied diplomatically that "Christianizing" was "better than law-enforcement" in such matters as marriage arrangements. In any case, there was then no law against Indians having more than one spouse. Furthermore, Lee stated, "From all I have seen of him the term 'Dog Soldier' cannot be applied to him now in the same opprobrious sense as

to others."⁸⁰

The development of agriculture, in Lee's view, was the same thing as the growth of what he conceived to be a rational system of nucleated settlements, colonies. In December of 1885, Lee was sent a questionnaire by the Secretary of the Board of Indian Commissioners, requesting information about Indian attitudes toward, and readiness for, a system of allotment in severalty. Lee replied that "no permanent good will result from the present system, if it can be called a system. To make the allotment in severalty and patents, therefore, a success, will necessarily involve an entire change in present methods." Communal lands, Lee argued, would have to be reserved for stock raising by colonies, and all timber resources reserved also for communal utilization.⁸¹

By March of 1886, the newspapers of the areas contiguous to the reservation were carrying reports of the progress of the Dawes Allotment bill, and the ambitions of railroad companies to get right-of-ways through the Indian territories. Alarmed, Cheyenne and Arapaho leaders sent a delegation to Lee to ask why the Cheyenne and Arapaho tribes could not have nationality status on the same basis as the Five Civilized Tribes of Indian Territory. Lee requested that these leaders should be allowed to go to Washington to present their views.⁸²

Lee was also convinced that the Dawes allotment plan was aimed at destroying all corporate Indian property. White entry upon reservation lands would mean an increase in white thievery, and other violations of Indian rights. Lee showed resentment that none of the requests had been honored that he had made to be allowed to send an Indian delegation to

appeal directly to the President. On the 26th of May, Lee sent in his resignation as acting agent, to be effective August 15th.⁸³

Fear of the coming of allotment stimulated greater efforts to secure all the best lands of the reservation through colonization, and Indian improvement of farms. The pioneers of the southwestern reservation region were succeeding in pulling themselves up by their boot straps. In August of 1886, the young men of Seger Colony earned \$400 for taking down Washita Cattle Company wire, and also received some wire from the company as payment in kind. Lee procured some oxen for the colony, and Seger, in June, trained some Indians to specialize in sodbusting. The results were excellent and two of the Indians, by August, were able to get work driving oxen and breaking some ground in the Darlington area districts.⁸⁴

Some Cheyennes in the Seger area did not settle near Cobb Creek, but picked out farms just east of the present town of Arapahoe in Custer County. They did not wait for the Washita Cattle Company contract to go through in order to get fencing wire. Kias set up a farm with his father and two mothers, dug post holes, and waited for the wire for a time. He gave up waiting and went hunting for deer on Bear Creek a short distance southwest of the Cheyenne farms. There he found rolls of wire abandoned by cowboys. "I told Mr. Seger about it," Kias recalled. "He told me to use what I wanted of it, then he gave the rest to other Indians. All the Indians wanted it." When spring came, Kias and the other Cheyennes returned to Cobb Creek to learn how to break land with oxen, and to receive swine to raise.⁸⁵

In February, Lee got the Seger Colony Indians a contract for

supplying part of the hay for Fort Reno.⁸⁶ By May, the Seger area Indians were building log cabins, having cut and hauled the logs themselves.⁸⁷ These bootstrap operations were hardly easy for the Indians. Lee tried to persuade "friends of the Indians" to contribute money directly to the Seger Colony. He wrote to one such "friend" that "If friends of Indians who are struggling to become civilized, would give these people substantial aid instead of so much theory and advice, their success would be greater."⁸⁸

It was not possible to employ such dedicated and imaginative helpers as Haury and Seger for the Darlington area "colonies." In March, Lee Sleeper, district farmer for the "North Canadian" group, was mainly involved in supervising the sowing of oats and the plowing of 140 acres on pre-existing Indian farms. T. H. Hambleton was supervising oat sowing in the north bank of the South Canadian River (later Bridgeport/Geary district.) E. M. Crotzer, in charge of the immediate Darlington vicinity, was doing much the same.⁸⁹

As late as July, there were only a very few lodges in the Upper Washita River valley where Red Moon Agency (Hammon District) would later develop.⁹⁰ The Kingfisher Cheyennes, under the leadership of Lame Bull, along with Arapahoes and mixed bloods, had established some of their farms, by 1885, outside of the reservation boundary. Kingfisher, Oklahoma was then largely a settlement of white teamsters. Lee attempted to have the Indians' homestead rights to farms near Kingfisher recognized. He also tried to work through the white managers of freight haulage and stage line at Kingfisher, in order to protect the Indians.⁹¹ As it turned out, not even the homestead claims of the Kingfisher white

teamsters, in 1889, were allowed by the Interior Department.⁹²

The colony that Lee had intended to establish in the northeastern corner of the reservation, called "Salt Creek," never attained any cohesion. There were some Cheyennes farming there in 1886; Touching Ground and Iron Shirt were mentioned as farmers. Lee tried to work through a local white rancher, A. H. Todd, who was legally married to a Cheyenne woman.⁹³ Iron Shirt eventually took his allotment at the headwaters of Salt Creek, as did a few other Cheyennes, and a good many Arapahoes. Only a few mixed-bloods took allotments on Salt Creek that were at all close to the Cimarron River of which Salt Creek is a tributary.⁹⁴

Lee found, by August of 1886, that there were very few full-bloods actually residing on Salt Creek; most of the Indians who had been there earlier had relocated at Cantonment.⁹⁵ The government-purchased equipment that had been sent there under the care of A. H. Todd, was being used by Todd primarily for his own benefit, and Lee ordered Todd to send the equipment to Cantonment. The reluctance of the Indian Office to purchase the fencing left by cattlemen in the northeastern reservation area, may have played a part in the failure of the Indian colony planned for that region.⁹⁶

The development of the colony that was to become Watonga District was jeopardized at first by the Indian Office appointment of an old and ill man, Seth Clover, to supervise the area. Lee instructed Clover to rely upon the guidance of Robert Bent, a half-blood rancher, as much as possible. (Thus the district was known as "Bent's District" for a time.) Despite the lack of competent supervision, the majority of "Bent's

District" Cheyennes who were outfitted with implements to farm in the district in 1886, eventually took allotments in 1891 that were near to their places of farming in 1886: One Eyed Bull; Gun; Bears Lariat; Howling Crane; and Big Head. Of other "Bent's District" Cheyennes mentioned in 1886, and identifiable on the 1891-1892 allotment roll, High Black Wolf took an allotment on Kingfisher Creek, and Hail took one near Cantonment.⁹⁷ .

In May and June, Lee tried to set up a close-knit cooperative farming arrangement for four or five families in Bent's District. About twenty-five acres were to be within one enclosure, to serve all these families. This plan was intended to conserve wire, economize on breaking costs, and facilitate tool-sharing.⁹⁸

Indian demand, by early April, for scarce agricultural implements and seed, wire, draft animals, housing timber, and sodbusting services, was increasing rapidly, especially at Cantonment. The preferential treatment of White Horse was a source of some resentment. Flying Hawk dictated an angry letter from Cantonment, charging that the Arapahoes were receiving most of the implements and farming instruction.⁹⁹ Adding to the demand at Cantonment, Little Robe pressed for assistance for Cheyennes like his relative Long Sioux, who had been farming south and west of Cantonment before agents Miles and Dyer had forced removal to Darlington.¹⁰⁰

In late April, Lee wrote to Haury to have patience with the Cheyennes. Lee had convinced the Indian Office to permit cattle to be driven by the Indians to Cantonment, and issued at different rates to different sized camps.¹⁰¹ In early May, Lee became more successful in

convincing White Horse that Cantonment Cheyennes would have to settle for smaller farms than they had hoped to make.¹⁰²

Lee transferred, in May, 5000 pounds of repair material for wagons and farm implements from Darlington to Cantonment.¹⁰³ He also had four two-horse cultivators and ten "double-shard" plows imported from Caldwell to Cantonment.¹⁰⁴ Of thirty-six double-shard plows imported in early June to the reservation, sixteen were allocated to Cantonment.¹⁰⁵

The accounting for beef ration issues at Cantonment was finally adapted, beginning in late May, to the integrity of the Cheyenne camps. Groups numbering about twenty could draw one beef every other week. Groups numbering about thirty drew three weeks out of every four. Camps not closely approximating these figures could have their excess numbers draw meat from the block at Cantonment.¹⁰⁶

The achievement of sub-agency status for Cantonment, however, largely depended upon the success of forcing children into school. The Indian Office was dubious of the plans of Lee and Haury, especially that aspect which involved transferring the Arapaho School at Cantonment more directly to Mennonite control.¹⁰⁷

In May, Lee sent arguments to the Commissioner of Indian Affairs, that the Indian Office should not expect a great many children to be enrolled at Cantonment schools, because of the inadequacies of the school plants. This referred to a very real set of circumstances. Lee accused the Indian Office of promising but not obtaining appropriations for repair of school buildings for three years.¹⁰⁸

In any case, Lee's plan to enroll more Cheyenne children in a Cantonment school gradually succeeded. In Late May, the Cantonment

Cheyenne bearing the name of Black Kettle volunteered to go to Camp Supply on a pass, in order to urge the enlisted Cheyennes to send children to the Cantonment School. Black Kettle had succeeded to some degree by early June. Furthermore, Little Robe, who had returned from the Washita in March and been given authority to supervise the cooperative use of agricultural implements by his band, threw his support behind the school in early June.¹⁰⁹ By the middle of June, the Dog Soldiers were finally helping to get children into Cantonment school. Lee wrote to White Horse and his associates to urge them to plan to get as impressive a number as they could enrolled on the final day of school. Lee would then be able to push for greater appropriations for Cantonment at the end of the fiscal year. Lee told them to send a letter through the literate Cheyenne, Frank Engler, directly to the Commissioner of Indian Affairs, advertising their achievements in civilization.¹¹⁰

The inflation of the figure for children enrolled by the close of the school year, permitted Lee to complain to the Commissioner of Indian Affairs in July that the school buildings at Cantonment were dangerously overcrowded, and desperately in need of replacement or remodelling.¹¹¹ Lee was still worrying, in September of 1886, after his resignation had become effective, that the civilizing effect of crowding Indian children into schools might come to be equated to burning them alive in "fire traps."¹¹² The crowding of the children in schools that lacked medical facilities created breeding grounds for disease, and Lee had been complaining of this since October of 1885.¹¹³

The duplicity of Lee is quite apparent in the founding of

Cantonment as a sub-agency. Lee had to learn how to manipulate and fool the Indian Office in order to achieve anything. The reforms achieved, however, made for a fairly stable population at Cantonment. Of the Cheyenne camp leaders drawing rations at Cantonment in late May and June of 1886, all but one of those who survived to take allotments in 1892, took them in Cantonment District No. 1: Morning; White Shield; Little Robe; Shave(d) Head; Roman Nose Thunder; Star(r); White Sun; White Horse; Good Bear; and Little Buffalo Thigh. Spotted Horse chose to have his camp take allotments in the Red Moon Agency area.¹¹⁴

The agricultural colonization, the basis for the agrarian settlement pattern of the Southern Cheyennes, was a system of capital rationing. The Indians, under the BIA, have always been subject to capital rationing.¹¹⁵ All farming operations, however, in the United States since at least the Civil War, which can be described as "family farms" have been afflicted by some form of capital rationing. The result has been the abuse of family or hired labor, abuse of the land through continuing cash-cropping or overgrazing, the turning of farmland into tax shelter investments for the rich, or the lapse of families into tenancy.¹¹⁶ The capital market has not been family-unit oriented.

What distinguished Lee's administration was the relative efficiency of allocation. In an ideal situation of unlimited resources, the BIA could have dealt with each Indian family as an independent unit, and provided economic justice to each family. Given the actual state of scarcity of agricultural capital, however, it was not possible to deal efficiently with the Indians on a family-by-family basis. Giving one handful of wheat seed and one handful of seed corn to each family would

have been possible, though not effective in any sense, but it would not have been possible, to allocate one threshing machine among several hundred families, even if one considers such a subdivison in terms of moving the threshing machine from one farm to another over time, rather than in the ridiculous sense of physically breaking the machine down.

Agent Lee tried to keep capital costs low by encouraging cooperation, which entailed nucleation of settlement. He was willing to work with community units as the Indians themselves defined them, which certainly saved time. Other agents tried to fit the scarcity of capital into a policy of dealing with the Indians on a family-by-family basis. The result was various schemes of favoritism. Thus, under Agent Miles, the Cheyennes who wasted their time trying to break land for themselves were favored. Agent Lee was encouraged by the Indian Office to withhold agricultural incentives from Indians like Wolf Robe, who showed great promise industrially, but were insufficiently civilized in terms of conformity to the monogamous ideal of marriage, and desistance from tribal ceremonial duties. Economic rationality in resource allocation, then, was not strictly conformable with BIA policy.

Allotment in severalty might have been considered a solution to the problem of allocation. Indians were attached to standard land units, and given pro rata payments on the basis of the amount of money paid by the govenment for "surplus" lands. It would seem that allocation should have become more automatic and less discriminatory. This did not in fact turn out to be the case, under "trust" authority. The next section will address such matters.

4. Digression on Capital Rationing within a Scheme of
Individual "Trust" Accounts

To some extent, the position of an allotted Indian was similar to that of a homesteader on the public domain. It is often said that 160 acre homestead tracts (eighty acres for land classified as especially good for farming) were "free." To make proof on a homestead, however, and receive fee title to the land after a five-year waiting period, required incurring the costs of investment sufficient to allow a person to reside on the land for a year, and cultivate the land to some degree. If a person borrowed against the homestead tract in order to meet the basic requirements for improvements, the homestead claim became, by default, a claim in prospective preemption, so that the land was mortgaged, thus entailing payment. If clear title needed to be received before the end of the waiting period, the homestead claim could be commuted to purchase. Large-scale speculators, along with cattle corporations and mining interests in the western United States, took advantage of commutation rules, financing the buying of the land by the maker of the homestead claim, and then paying the "homesteader" off for the land, with a little profit for the "homesteader's" services. In some decades, for instance the 1880s, and the years just after the turn of the century, more fee patents were issued through preemption and commutation than through final proof on original homestead claims.¹¹⁷

Abandonment of the land through failure to make final proof on homestead claims generally occurred at a high rate in the Great Plains. For instance, about 43 percent of all claims in Nebraska were abandoned. Even if the homesteader came into the area with a great deal of money

saved to make improvements, he was not assured of being able to make final proof. Homer Socolofsky has determined that nearly half of the homestead failures in Nebraska in 1880, came about because of sickness or natural disasters.¹¹⁸ Thus, no matter whether the homesteader came into the situation with considerable savings to invest or not, success at homesteading was largely a matter of the degree to which "Capital costs were kept low by expanding slowly and sharing on needs," as Gilbert Fite puts it.¹¹⁹ Cooperative efforts, and interest-free loans among friends and extended-family members, were vital to stability of residence among pioneers.

Indian success on allotments was subject to the same sort of budget constraints. Indians could not mortgage trust-patent land. Returns from payments for "surplus lands," from BIA auction of inherited lands, or from Indian Office leasing of lands of dependents or (after 1902) up to three-fourths of the allotment of able-bodied Indians, could provide some capital, but could hardly provide insurance against extreme illness and natural disasters. In this section, then, I shall provide some examples of how Indians tried to provide for their capital needs by sharing or cooperation.

The older Indians of Cantonment Agency remained loyal to that agency as a general institution throughout the trust period. Fearing, in 1920, a discontinuation of Cantonment School, and the consolidation of the three Cheyenne and Arapaho agencies, a delegation of Cheyennes and Arapahoes went to Washington to present their case. The Cheyenne Yellow Hawk put the matter in the following way:

That is the reason the Cantonment Agency was established there; it was through the request of the older Cheyenne Chiefs. There are more Cheyennes around Cantonment than any other part of the Reservation and it is considered to be the headquarters of the Cheyenne Tribes. That is all I have to say.¹²⁰

The Dog Soldiers continued their dedication to Cantonment and to agriculture throughout the trust period. The Mennonite Missionary Rudolphe Petter wrote of them, to the Commissioner of Indian Affairs in 1910:

Chief Mower's band has a pretty good set of men, the old band of "Dog Warriors;" in spite of their having been the most conservative band, their men had stamina and have not been afraid of work. It is for this reason that most of them have refrained to sell land and they have almost no income from such source...a good way would be to let them have their lease money to pay their debts and supply themselves with good implements. Up to now they have helped each other by furnishing, one a horse, one a harness and the third a corn planter or a cultivator. Chief Mower planted a field of corn himself but he has no cultivator and has to wait until his white neighbor is done. Several of his men have good corn fields, one having 160 acres. You see these men are willing but they must have something to live on or the next step will be: the selling of land.

Chief Mower's daughter, a young woman, follows her father's example and has a nice vegetable garden on her father's land. Her own land is leased, with that money she would like to pay debts to the store and help her father buy a cultivator and other implements. In such cases were it not possible that such ones get a greater part or all of their lease money, or even handle their own leasing under the advice of Mr. White?"¹²¹

The three "chiefs" of "Chief Mower's District," the Dewey County side of Cantonment, were, at this time, Mower, Big Man, and Necklace. Red Leg was the "Dog Warrior" leader; White Horse was dead long before 1910. All these men were granted "Class A" leasing privileges in 1910,

and these privileges were renewed for all four men in 1913.¹²² These "privileges," however, conferred more responsibility than they did real authority. Male Indian family heads rated "Class A" were charged with making lease arrangements for their dependents. Wives could make their own arrangements unless they formally transferred responsibility to their husbands.

The policy developed in 1910, was called a "test of competency to handle funds," but the "funds" from leasing were still retained in individual government trust accounts. No allocation of these funds was to exceed \$25 for any given authorized purchase, and total expenditures could not exceed \$100 per Indian per month.¹²³ Before 1910, the Indians had been receiving proceeds from sale of inherited lands in fixed monthly payments of ten dollars per person.¹²⁴ Lease payments were doled out in much the same fashion. The official reason for this was that many Indians tended to waste money on gambling, or lose the money quickly to creditors, if they received the money in large sums.

In the transitional year of 1910, Mower and his associates sent a letter to the Commissioner of Indian Affairs.¹²⁵ They felt that they were being driven to sell their lands in order to finance their farming. It seemed to them that the trust accounts system, linked to the BIA system of determining heirship rights, was destructive of Indian attempts to accumulate money and use funds within local communities. The case of young Ed Soleleather was pointed to: "His money amounts to \$1293 and he will hardly live to use the fifth part, leaving it to distance relatives." (Soleleather was dying of tuberculosis.) Local communities, it was felt, were never recognized in their importance.

The Superintendent and Special Disbursing Agent (to use the full title) of Cantonment in 1910, Byron White, did not recognize the economic integrity of Mower's "district" and its group of spokesmen. The BIA constantly toyed with the idea of putting a day school in Mower's district, but never acted on it.¹²⁶

In poor agrarian societies, trickles of current income will not support, for any given small-farmer, a level of savings sufficient for the investment needed to break the cycle of poverty. The economist Michael Belshaw has referred to this kind of situation in terms of the "'lumpiness' of worth-while productive investments."¹²⁷ Even when credit can be obtained on reasonable terms, buying on time cannot help to solve this problem, because the situation is complicated by the absence of sufficient funds for both long-term investment financing and insurance against personal and business misfortunes.

An excellent example that demonstrates the last point, is that of the BIA conditions on the use of trust funds by Nat Murphy to start profitable farming in 1911-1913. Nat Murphy was a Calumet District Cheyenne. His trust account had accumulated \$632.85 by the beginning of 1912. This money was doled out to him in \$200 chunks by the BIA. Two chunks were issued in 1912, the second only after Murphy used the first chunk only to pay past debts, buy implements and seeds, obtain good livestock, and repair fixtures. Murphy seemed to be making a modest success at farming up until the time that his barn and seed were destroyed by fire. He survived the winter of 1912-1913 by working for wages. Since the second \$200 had been invested by Murphy in the same manner as the first chunk of trust money, the BIA felt justified in

doling out the last chunk, to see whether Murphy could start again on that amount.¹²⁸

When the first attempts were being made to start farms on the Great Plains, in the 1850s, about \$500 dollars, for immediate expenditure, were considered to be the absolute minimum to start up a very small farm.¹²⁹ It would seem that Murphy's entire \$632.85 would have been a very small sum to be invested as one chunk in 1912. It is true that some improvements already existed on Murphy's land, but it is also true that much of the \$632.85 had to be used to retire indebtedness. The most astounding aspect of the situation was that the BIA officials seem to have thought of themselves as extraordinarily generous in doling out the trust money to Murphy.

It must be remembered that the decade following 1909, was one in which Interior Department rivalry with the Agriculture Department was very intense. Charges by the Agriculture Department that the BIA was incompetent to manage Indian lands, especially forested lands, had resulted in a transfer, for a short time though effective only on paper, of several reservations to Agriculture Department supervision.¹³⁰ The decade following 1909, is one in which the BIA was expected to prove its competence.

Non-Indian farmers in western Oklahoma, as elsewhere in the United States, took advantage of the good prices of World War I to finance long-needed improvements. Many gained decent homes and barns for the first time in state history.¹³¹ Indians also attempted to respond to the war boom by increasing output and investment. The Commissioner of Indian Affairs, however, was somewhat alarmed, ordering that "In the

enthusiasm for an increased acreage, do not overlook the necessity of proper intensive methods to obtain the maximum yield from each cultivated acre."¹³² Out of context, this statement might be seen as a responsible, conservation-minded admonition. In a context where increased acreage per farm meant increased working capital per farm, the statement must be taken to mean that the Indians should work themselves to death instead of being allowed to acquire adequate capital.

Cooperation and sharing among Indians, of the sort mentioned in Reverend Petter's letter about the activities of Indians associated with the Dog Soldier nexus at Cantonment, were important means of survival in farming. And the excerpt from the letter, also notes that the Indians were involved in sharing with white neighbors as well as among themselves. Vital to success was the flow of funds among farmers, whether among relatives or friends. BIA management of individual trust accounts, however, made certain that the funds did not flow freely or naturally. The case I offer as my principal example of such interference, is again drawn from the situations of those involved in the Dog Soldier nexus at Cantonment.

Ben Buffalo (Red Bird) was the husband of Black Woman, who was the daughter of Necklace, a leader of the Cheyennes in Mower's district. Ben Buffalo himself, in the admiring words of Cantonment District Farmer Jay Johnson, in 1916, had "a great deal of prestige with the Indians and also the whites some. He is one Indian that beats the whites raising crops."¹³³ Ben Buffalo was primarily a pig farmer, constantly at war with hog cholera.¹³⁴

During the agricultural depression that followed World War I, Ben

Buffalo raised some money by part-time clerking in a Canton store. He was, however, forced to sell his original allotment, to which he had received fee patent through Competency Board decision, by 1921, in order to finance continued farming operations on his wife's land.¹³⁵

In 1930, another depression forced Indians to pool their resources and work the land in small, extended-family residence groups. Necklace, along with the family of another of his sons-in-law, moved in with Black Woman and Ben Buffalo.¹³⁶ In order to contribute to the farmstead's development, Necklace sought to arrange to sell his one-third heirship interest in the allotment of White Head to Masachta for \$2000, which would have made Masachta sole heir. A question of BIA policy was raised by this circumstance, since Masachta was a woman, and Black Woman was likely to be Masachta's sole heir. It was, therefore, determined that Black Woman should have to deed Necklace forty acres from her allotment, in order to legitimize the investment of the \$2000 by Necklace. The dickering in this matter cut into the spring farming season.¹³⁷

The question of policy was related to a series of policy issues involving the use of funds from the sale of one spouse's land to improve the allotment of the other spouse. Most policy decisions resulted in men selling their allotted or inherited lands and investing in their wives' lands. The reverse was not encouraged:

I am returning to you herewith the application of Walking Woman, allottee No. 840, together with your unfinished report on form 5-106. I am not inclined to make favorable recommendation in this application, as I believe it would be better for her to sell her land thru the agency office, so that her funds can be supervised for her best interests. She gives as her reason for wanting a patent that she wants to sell the land and improve her husband's place, which is

contrary to Office policy unless the husband deeds to his wife a part of his allotment upon which her improvements are to be placed...¹³⁸

This decision by (Special Disbursing) Agent W. W. Scott, of Concho Agency, in 1915, does not make clear the bias in favor of women retaining land. Such policies, informally arrived at by field agents, were being practiced as early as 1908, by Cantonment Agent Byron White, who expressed prejudice against permitting "young women who are mothers of families" to obtain patents to sell their lands.¹³⁹ Aspects of a more formal policy were explained by Assistant Commissioner of Indian Affairs F. H. Abbott in 1911:

In the case of an Indian woman wishing to build a house on her husband's land, the practice which has been found satisfactory to all concerned is to have her purchase from him a sufficient amount of ground for the site of the proposed dwellings and out-houses. When this is not practicable, because of her lack of sufficient funds, the husband has been found willing to deed to his wife the necessary site for the buildings. This arrangement has the advantage of safeguarding her interests in the event of his death.¹⁴⁰

The Indian Office refused to turn such policies into hard and fast rules, when agents ("Superintendents and Special Disbursing Agents") for instance William Freer of Concho Agency in 1911, asked directly whether husbands' investments in wives' lands were more acceptable than wives' investments in husbands' lands.¹⁴¹ The chief legal constraint on residence choices of married couples was in the form of a prescription that children had to be enrolled at the agency of the mother's original allotment, without consideration of where the family actually resided.¹⁴² This resulted in some confusion in the making of censuses by Cheyenne and Arapaho agencies. For example, the agency copy of the 1922 Cheyenne

census for Cantonment, is annotated to show that Black Turkey was actually living with his wife Paulene Howling Crow at Seger Agency, where she and the children of the family were enrolled. Itching Nose and her children were enrolled at Cantonment, but were actually living at Seger Agency with her husband Young Calf, who was enrolled there.¹⁴³ Numerous examples could be given. The point is that business was handled for a woman and her children at the agency where the mother had originally been allotted or enrolled. When residential choices involved marriages between Indians of different enrollments, and the marriages produced offspring, most of the members of any given family had to have their trust account transactions handled at a considerable distance if the wife chose to reside with her husband.

In terms of recommendations to issue patents to Indians, or to recommend that their lands be sold by BIA auction, there was little resistance to allowing men to sell their lands for the stated purpose of improving and settling on their wives allotments (provided, of course, that the men were deemed competent enough to receive patents, or that the land was to be sold by the BIA and the proceeds handled as trust accounts). Cantonment Agent Byron White had no objections to competent men selling their lands to invest in their wives' allotments, even though they were young men who were fathers of children.¹⁴⁴ Other agents seemed to have the same attitude.¹⁴⁵

The obvious result of this was the concentration of land in the hands of women, as men sold off more and more land, or transferred it by deed or sale to women. Fifty of the sixty Cheyenne families of Watonga and Eagle City Districts that were interviewed by James Ruggles in 1930,

owned land. In only eight cases were the men the sole owners of the land on which the families resided. In nineteen cases the wife was sole owner. In all other cases the wives owned part of the farms on which the families resided.¹⁴⁶ In the 1930s, Mrs. G. A. Linscheid, the wife of a Mennonite missionary at Cantonment, noted the association of land scarcity with residence of the husband with the wife or her family. Whether the husband had brought money with him into the household for investment or not, Cheyenne traditions of matrilocal/uxorilocal residence tended to limit the control of the husband over the land.¹⁴⁷

Outside of situations involving sales or transfers of husbands' lands for the benefit of homes and farms of wives, unsecured transfers of funds among family members were usually discouraged by the Indian Office and the Cheyenne and Arapaho agents. For instance, Bird Seward, a good farmer but a failure at financing a general store in Fay, Oklahoma, in 1910, was not allowed to have his mother pay off his chattel mortgage, though she had sufficient funds in trust.¹⁴⁸

Inter-Indian transfers of trust funds, even among family members, were put on a formal basis by the Indian Office. Papers had to be signed for secured mortgages, and cash repayment enforced. I say "secured," but, given Indian Office requirements for "ample security," these mortgages were probably routinely oversecured, making them a bad credit deal.¹⁴⁹ There were even some instances, as in the case of transfer of funds, for seed purchase, from Maria Lamebull to Sampson and Gordon Lamebull, in 1917, in which the BIA tried to force the proposed recipients of funds to mortgage their prospective crops, a very precarious financial arrangement.¹⁵⁰

In some cases of Indian cooperation in farming efforts, the BIA also tried to formalize arrangements, in terms of sharecropping.¹⁵¹ This was not always a matter of simple BIA interference, however. For instance, the Kingfisher Cheyennes Ralph Goodman and Christian Starr put in wheat on land belonging to Edna Wolf in 1919. On account of Goodman's being drafted, the wheat was not threshed early enough to sell it, because 1919 was a year of glut on the late wheat market. Starr then demanded a third of the crop, as if on a share-crop contract, but the Assistant Kingfisher District Farmer, the Cheyenne Kish Hawkins, preferred to handle the matter by having Starr paid off in cash as if he had been employed as a day laborer. Starr proceeded to hire a lawyer, and the matter got even more complicated, involving questions about mortgages.¹⁵²

Clearly, allotment did nothing to improve the state of capital rationing. At best, the system of individual trust accounting merely complicated matters. Certainly, the system often impeded efforts at cooperation, through such efforts were also complicated by agricultural market pressure at times. Its worst effects were to prevent the ready flow of funds through interest-free loans of cash, among family members and friends.

5. Innovations, 1886

I now return to the evaluation of the innovations introduced under Lee's administration in 1886. The farming status of the Cheyenne and Arapaho colony districts in August 1886, were as follows:

<u>"Locality"</u>	<u>"Number of Indian Farms"</u>	<u>"Acres Cultivated"</u>
"Near Agency"	70	675
"On North Canadian River"	81	560
"At or Near Cantonment"	31	260
"On Washita River (sod)"	26	75
"On South Canadian River"	19	100
"On Salt Creek"	8	50
"Kingfisher"	10	60
"Estimated, Upper Washita"	10	50
"Estimated, Deer Creek"	3	18
"Oklahoma"	4	20
Total	280	1,868

These figures from the 1886 Annual Report are exclusive of acreage accounted for by "half bloods," "intermarried whites," and reservation school children. Also excluded were the 120 acres, one acre per family, of the gardens of Cheyenne and Arapaho families whose heads were enlisted in the U. S. Army.¹⁵³

"Bent's District" seems to have been compounded with the North Canadian District. Lee had to pull Seth Clover out of the Watonga District area in July of 1886, because of Clover's ill health.¹⁴⁵ The aggregate in the Deer Creek area was not formally organized or supervised, as far as I can tell, though there was a little farming going on. Indians probably located in the area in large part because there were cattle corporation improvements in the area, even a well-defined wagon trail.¹⁵⁵ Some Indian cattle raisers had been active near this vicinity in the early 1880s. One "old Cheyenne," called by the cowboys "White Bead," was herding in the region in 1883.¹⁵⁶

The increase in total acreage farmed by full bloods in 1886, over the figures given by Dyer in 1885, seems to be largely a function of the 811 acres that Lee had broken out by professionals under contract in 1886. Mere acreage figures do not tell whether the acres were really

developing into productive farms, but there is plenty of evidence that farming innovations introduced by 1886, were of the sort to make these gains permanent. These "innovations" were not just introductions of equipment, but modes of land use.

One of the most important new practices introduced by Lee was hardly the result of any conceptual breakthrough. Previous agents had not bothered to secure and care for implements on hand. Under Lee, "old plows that have lain in the grass and weeds for almost years have been brought in for repair so as to use them."¹⁵⁷ Files and other means to keep implements in operation were issued directly to Indians farming for the first time.¹⁵⁸ The largest parts of 25,000 board feet of timber in logs, ordered by Lee in October of 1885, were to be used for repair and construction of Indian and agency corrals (6000 feet), and for issue to Indians who were building houses (5500 feet). Two thousand feet, however, were allocated to building the first adequate shed for housing reservation agricultural implements.¹⁵⁹

Earlier and later reservation administrations used "drought" as an excuse for complete crop failures. In Lee's reports and correspondences, drought was considered to be a condition that had to be adapted to, and not an excuse for anything. The extreme drought conditions of 1886, especially in May, slowed the progress of professional sodbusters. Any localized rainfall was taken advantage of, however. For instance, Lee pressed for the breaking in the Watonga District area to continue as long as the terms of the fiscal year allowed, "to include Saturday, July 3."¹⁶⁰

The introductions of "two-horse cultivators" and "double-shard

plows," especially the Cantonment allocations, were undoubtedly responses to the limitations, especially irksome to the Dog Soldiers, on the size of plots of land that could be enclosed, given the scarcity of wire. When length of furrow must be curtailed, turning time, hence effort, in plowing is increased. By having two or more side-by-side cutting edges, whether knife share or disk or cultivator shovel, turning time and effort are decreased.¹⁶¹

"Double-shard" cultivators and walking plows were very popular throughout the 1800s among corn growers. Cutting, in the mid-1800s, was usually with shovels, but later disk and other variations became widespread. Such implements were favored not only for decrease in turning time, but also because they gave better cultivating control near small corn.¹⁶²

Cultivators were to remain very important implements for the Cheyennes throughout the trust period. Ruggles, in his 1930 survey of Cheyenne families in the Watonga area, found cultivators to be the most common tillage implement. Twenty of the sixty families surveyed had cultivators, while only four had more ordinary mouldboard plows, and ten had harrows. The next most common implements after the cultivator were the lister (eighteen families) and the ridge buster (fifteen families).¹⁶³

The evolution of the use of ridgers on the Great Plains, especially the lister, is connected with the popularity of "double-shard" implements used to roughen the soil. As James Malin put it, the lister is essentially "a double plow with a divided moldboard, splitting the slice and turning half each way," resulting in fields of heavy ridges

and deep trenches.¹⁶⁴ The development of the lister in the late 1800s was essential to the development of a viable wheat complex on the Great Plains.

By July of 1886, mechanized threshing was producing enough seed wheat to sow 400 acres in the fall on the Cheyenne and Arapaho reservation. Sandy soils, dry weather, and high winds made broadcast sowing unproductive. Lee had requested two seed drills in January, but the Indians' productivity was sufficient to prompt him to request two more drills in July. Lee stated that winter wheat was a crop that could secure the Indians' financial future. The Indian Office, however, resisted his general idea, and particularly Lee's request for additional seed drills.¹⁶⁵

The full significance of the types of tillage and planting innovations desired by Lee can be emphasized only by examining the history of corn culture among both Indians and non-Indians, and the connection between corn culture and winter wheat development on the south-central plains. The Indians, traditionally, as in the practice of Kias' grandmother that was noted in section two of this chapter, planted several corn seeds in each of a series of mounds. Melons were grown between hills of corn, and the trailing of melon vines through the fields stabilized the soil.¹⁶⁶

Whites adopted the complex that they found practiced by the Indians of the northeast, and of the prairies west of the Mississippi. The larger plantings were of hills spaced two to four feet apart, creating fields of intersecting lines of hills. Soil was loosened with hoes around each planting. When plants began growing, they were thinned to

some extent on each hill, if more than one seed had escaped birds, insects, and mold. When the horse-drawn plow came into general use among non-Indians, the hills were created by light cross-plowing, roughening the hills but not creating true furrows.¹⁶⁷

Cross-plowing had also become common in North America for wheat and other small grains by the end of the 1700s. Furrows were run over a field using light stirring plows, then there was a second plowing at right angles to the first, often followed by harrowing. Thus, an even seed bed was created.¹⁶⁸

Most of the breaking done for the benefit of Cheyenne and Arapaho farming in 1887, had been originally planned by agent Lee. Six hundred and sixty-seven acres were broken by professionals under contract. The Indians consolidated the new fields by cross plowing with their own teams. This left the soil rough, and corn continued to be the major crop.¹⁶⁹ Even without considering how the land was planted, the cross-plowing was a good conservation move. (Much of the corn planted on newly broken ground after Indian cross-plowing in 1886, failed, though the only grievous failure was in the Seger Colony.¹⁷⁰)

In western Oklahoma, "cross-warp" use of the lister, the shovel-cultivator, or the light harrow across lister ridges, was to become one of the most successful measures available to farmers who used the strategy of "roughening the soil" to fight erosion.¹⁷¹ In other countries, notably in East Africa, where all lister-like instruments are simply termed "ridgers," soil-roughening "cross-warp" techniques are common even today. The practice is called "tied ridging," and has proven most successful on relatively level soils.¹⁷²

Among non-Indian settlers of the Great Plains, corn culture and wheat culture grew up together. Market conditions often required substitution of one of the two crops for the other. Thus arose a conflict in basic modes of field preparation. Wheat had always grown best when planted in a relatively smooth, even bed. Maize required hilling and roughening.

The droughty and windy Great Plains environment conditioned the direction of adaptation of planting practices. The smooth seed bed arising from European traditions had to give way to the less erosive roughening practices native to North America. Thus, the seed drills long preferred for maize planting were adapted to small-grain needs.

By 1897, the lister-drill combination, first tested by J. S. Hollinger in Kansas in 1887, featured staggered lister-hoes for cutting, along with a grain spreader to distribute grain in the furrows instead of in straight single rows. This permitted spring cultivation by harrowing of ridges in the same direction that fall sowing had followed. Hence the requirement of cross-warp cultivation was obviated, unless additional conservation measures seemed requisite.¹⁷³

Tillage was not the only area in which innovation was required on the Cheyenne and Arapaho Reservation in 1886. Lee had to press for early delivery of three mowing machines and six sulky hay rakes (horse-drawn, wheeled rakes). In May, it was feared that the BIA would not get the mowing machines and sulky rakes to the reservation before the projected haying season of July and August.¹⁷⁴ As it turned out, July would have been too late.

If spring and early summer are very dry, and native pastures and

feed crops make short growth, the wise Great Plains farmer will mow early. Lee got the mowing machines by mid-June, and put them into action immediately. With the sulky rakes, he knew, the Indians would still be able to salvage considerable hay. Lee went to the open-market to get the sulky rakes immediately.¹⁷⁵ When a drought is not relied upon as a simple excuse, it need not be completely destructive.

The timing of the mowing was ecologically critical. During droughts, perennial bunchgrasses (especially the bunchgrass "bluestem" of the sorghum tribe) may be displaced by low-value annuals in western Oklahoma. Early mowing may permit the development of good fall stands of native perennials, if any moisture becomes available. This was demonstrated in the 1940s on experimental fields in Woodward County, Oklahoma, where pastures had been re-seeded to native grasses.¹⁷⁶ Early mowing had long been part of the common wisdom of practical farming experts in Oklahoma, for native pastures not yet requiring re-seeding to bunchgrass perennials.¹⁷⁷

The salvaging of prairie hay and improvement of native fall pastures were economically critical in 1886, because the feed crop of major emphasis, oats, came up much too short because of drought, and had to be cut early, in June. The oat cuttings were stacked by the Indians for winter feed, but the cuttings were too short to thresh for seed.¹⁷⁸ As a cool-weather crop, oats competed with corn for spring planting, and oat crops were not sufficiently drought-resistant to withstand many western Oklahoma summers. With grain sorghums becoming popular in eastern Oklahoma in the early 1880s (then "Indian Territory"), I cannot determine why Dyer and Lee put so much emphasis on oats as a feed crop.

The last major step of ecological importance taken by Lee followed the time of his official resignation. In mid-September of 1886, he requested that money be appropriated for the new agent, G. D. Williams, to contract for professional breaking to continue that fall, in the open market. He wanted the land broken in the fall, in order to "facilitate the planting and raising of better crops next season."¹⁷⁹

Whether fall or spring breaking was best for Oklahoma was a matter of great controversy in the early 1900s, among farm experts. An elementary reason for breaking land in fall was that it did not make breaking compete for time with the many other activities necessary in the spring. More fundamental arguments concerned the fact that breaking in early fall turned under weeds, grain-stubble, and straw-fall, allowing time for such materials to decay and form humus before spring planting. Fall plowing also gave nature's own cultivating system of weathering, series of winter freezes and thaws, a chance to work to generate more topsoil.¹⁸⁰

Studies of seasonal succession of floral dominants (now called "aspection" by ecologists) have indicated that fall is an excellent season for dealing with weeds in Oklahoma, at least in the central part. Maximum vegetative development and dissemination of native species occurs between August 1 and November 5.¹⁸¹

Some of the logic of aspection, applies, however, to crops sown in the fall. Both agricultural experiment station data and the common wisdom of western Oklahoma farmers demonstrated, by the early 1920s, that heavy seedings of wheat after the middle of October, or before the

middle of September, produced no greater yields than lighter seeding done in the interim.¹⁸² This end-of-September to middle-of-October time frame for sowing was rigidly adhered to by the Indians of Kingfisher, who were avid wheat farmers by the end of the first World War.¹⁸³

The wheat farmers of western Oklahoma generally agreed that early preparation of soil was valuable. If done immediately after harvest, turning the ground reduced moisture losses through evaporation. Turning under weeds helped to increase the humus content of the soil. "Early preparation" for a wheat farmer, however, meant summer tillage, preferably in July directly after harvest. Farmers on sandy upland soils tended to rely on the lister for the early preparation, since the heavy ridges prevented the soils from blowing or drifting.¹⁸⁴ Corn remained a favorite feed crop for many bottomland farmers in western Oklahoma, and they often preferred fall breaking.¹⁸⁵

Matters of aspection become of special concern in the Cheyenne case, because of the timing of tribal visiting and ceremonies. "Winter camp" gatherings sometimes jeopardized Indian farming success if Decembers and Januaries happened to be extraordinarily cold, and livestock on farms had been left completely unattended. The winter gatherings were mostly local affairs, however.¹⁸⁶ They often seemed to represent groups that would have constituted nucleated settlements, if nucleation had been allowed. "Whirlwind Camp" near Fay, Okahoma, was an example of the development of an Indian permanent village from a "winter camp" basis.

Cheyenne and Arapaho agents, during the trust period, were not always so obtuse as to fail to recognize that permitting nucleation of

farmsteads would settle most of the problems perceived in Indian winter gatherings and visitations. In 1915, Concho Superintendent and Special Disbursing Agent W. W. Scott, even as he was undertaking the final destruction of Whirlwind Camp, proposed building houses for the Indians in small village groups. Barns for the livestock, and gardens, could be grouped near to the houses. Economies of scale could be realized in establishing good water and sanitary facilities, instead of wasting money on establishing such facilities for each isolated farmstead. The Indian Office, however, answered that the the establishment of such villages would increase racial segregation, and that the BIA was not in the business of designing sanitary facilities for communities.¹⁸⁷

Of more serious concern to the BIA officials was the pan-tribal Arrow Renewal ceremony of the summer, and the large size of some inter-tribal visitations in the summer. Agent Lee obtained the cooperation of the Cheyenne military societies, including the Dog Soldier society, in postponing the celebration from June to late July in 1886, in order to accomodate the period of emergency harvest activities.¹⁸⁸ The timing of celebrations on the basis of harvest completion requirements was thereafter considered, by the Cheyennes themselves, as the proper way to handle the matter.¹⁸⁹

Before World War I, the major Cheyenne summer ceremonies generally took place in July.¹⁹⁰ After the first World War, there seemed to be a shift to early or middle August.¹⁹¹

The month of prime harvest for different crops varied, in western Oklahoma, as elsewhere, from year to year, according to the pattern of precipitation and the timing of preparation and planting. The Oklahoma

State Board of Agriculture furnished state summary statistics, for the period 1911-1915, for percentages of crops completing growth by the first of each month of their common harvest months (the statistics for cotton were for the 25th of each month). The highest five-year average percentage for corn (79%) was attained by the first of July; for winter wheat, by the first of May (87.4%); for oats by the first of June (73.6%); for hay by the first of May (88.6%); for cotton by the end of June (81.6%); and for Kaffir corn (a grain sorghum), by the first of July (83.6%).¹⁹²

Therefore, by holding major ceremonies and visitations in July, the Indians may often have jeopardized the corn and Kaffir corn harvests, but probably not critically. The chief damage that could have been done was to take up the best time for early preparation for wheat, which fell in July. The shift to August ceremonial dates after World War I might reflect the greater development of wheat farming among some Cheyenne groups that occurred in response to the war boom.

In any case, neither the magnitude nor the exact timing of summer ceremonials and visitations can be determined. Furthermore, the best month for harvesting a crop was really of great variability. The most successful farmers tended to plant very early in the year if the winter had been very wet, and much later if the winter and spring were dry, but even that rule-of-thumb did not always pay off, and the timing of harvest was not a simple function of the timing of planting. On July 24, 1902, the Red Moon Agency Cheyenne, White Shield, asked permission to visit the Northern Cheyennes for a short period, since he had just finished putting up hay, and he was not yet ready to harvest corn.¹⁹³

George Bishop, of the Oklahoma Farmer-Stockman staff, recalled 1902 to be a year when no rules about timing of preparation, planting, and harvesting, had much to do with relative success of farming operations. The year 1902 had been the best year for rainfall that western Oklahoma farmers had yet encountered.¹⁹⁴

In considering the timing of Indian ceremonials, it should be considered that native customs alone were not at issue. The camp meetings and "revivals" of Baptist Missionaries contributed considerably to the degree of seasonal aggregations, especially amongst Watonga District, Calumet District, Geary District, and Kingfisher District Indians. They held such meetings in the Christmas season.¹⁹⁵ Major aggregations of Indians were encouraged in July also.¹⁹⁶ Sometimes the Indians own groupings were taken advantage of; sometimes the entirety of the gathering was planned by the Baptists. The Baptist missionaries even accompanied Cheyennes and Arapahoes on intertribal visits, especially visits to the Kiowa and the Pawnee.¹⁹⁷

A complaint often voiced by Agents concerning Indian seasonal aggregations and inter-tribal visitations, was that such activities were occasions on which the Indians gave away valuable items as gifts.¹⁹⁸ In such practices, the Baptist missionaries gave considerable encouragement to the Cheyennes and Arapahoes, though the best Indian gifts of all, as the Baptists seemed to consider, were gifts directly to the Baptist churches.¹⁹⁹

The BIA objected when the amount of proposed Indian gifts to the Baptist churches ran into hundreds of dollars of trust money.²⁰⁰ Furthermore, some attempts were occasionally made by the BIA to talk the

Baptists into cutting out some of their revivals, or at least reducing the scope and length of such gatherings.²⁰¹ These were very feeble attempts, however, compared to action taken against traditional Cheyenne religious observances.

Cheyennes and Arapahoes, however, were not completely blind to seasonal economic circumstances in their observance of customary ceremonials. I would say that the adjustment of timing of summer ceremonials and visitations to the timing of harvests was as important an innovation for successful agrarian adaptation as any other innovation introduced during Lee's administration. Moreover, it was not fair for the BIA to try to suppress traditional Indian camp meetings while making few efforts to suppress aggregations encouraged by the Baptists.

6. A Period of Confusion, Until the Turn Of the Century

The worst failure of implementation of the colonization scheme, during Jesse Lee's term as acting agent, was in the area of housing. This is not to say that 1886 was not the greatest boom year for housing starts during the reservation period. Lee, however, tied up all the trained mechanics on the reservation in repairing old farm machinery, or setting up new machinery. He purchased log timber for Indian houses and arranged for the Indians to be allowed to scavenge timber from dilapidated buildings at Post Cantonment, but construction was mostly undertaken by the Indians themselves with minimal supervision or expert assistance. Open market purchases, in June of 1886, of finished carpentry items permitted them to complete many houses without expert carpentry assistance: purchases of window sash, doors, shingles,

flooring.²⁰² Nevertheless, almost all aspects of Indian housing starts were left to the Indians' own efforts, including the cutting of logs for basic construction.²⁰³

Houses entirely the result of the Indians' own efforts continued to be a feature of the Cheyenne and Arapaho Reservation area long into the trust period. Three of the Cheyenne houses pictured in the 1916 Annual Narrative Report of Cantonment Agency had been constructed entirely by their occupants.²⁰⁴ By the time the non-Indian settlement of Bridgeport, in Caddo County, across the South Canadian River from the former Cheyenne and Arapaho Reservation, was being founded in 1901, most Cheyenne housing was concentrated in what the settlers of Bridgeport called a "Cheyenne farm camp" of log cabins.²⁰⁵ The Bridgeport District Cheyennes were lucky to maintain a nucleated settlement pattern in the form of relatively permanent housing.

When G. D. Williams relieved Jesse Lee as agent in the fall of 1886, the new agent resolved to take a different line from Lee's with respect to Indian community formation. In January of 1887, Williams stated that "I have somewhat changed the system of settling the Indians in so far as to prevent their locating villages. At Seger Colony...I had several houses taken down and rebuilt at points where each family would be able to take up the amount of land provided by the treaty of 1868."²⁰⁶ Williams was interested in promoting what he considered to be self-reliance amongst the Indians. He chose to pay the Indians \$1,959 dollars to do breaking of land for 1888, instead of contracting with professional sodbusters. He hoped to expand acreage by 653 acres in this manner.²⁰⁷

The result of Williams' policies of dispersion of settlement, and self-reliant sodbusting, was the generation of abandoned farms by 1889.²⁰⁸ When district farmers reported to Charles Ashley, who took over as agent in 1889, only 2,315 of the 3,375 acres reported to have been under cultivation by the Indian full-bloods in 1888 were still in production in 1889. This was less than Williams' figure of 2,550 total acres for 1887. Essentially, the only real progress made since the Dyer administration had been achieved by Indian cross-plowing of professionally broken acreage.

The policies of inceasing dispersion of settlement do not seem to have contributed to administrative efficiency. Agent Ashley, in his 1889 Annual Report to the Commissioner of Indian Affairs, quoted John Seger's farm report, in which it was stated that "the reason for not raising wheat the past year was no seed, no market, no thrashing-machine in proper time--no fault of Indians or climate."²⁰⁹

The district hardest hit was the one in the immediate Darlington vicinity. C. C. Painter, the Washington agent of the Indian Rights Association, wrote of this in 1893:

The large number of hopeful beginnings at farming and house building in the immediate vicinity of the Agency made during the administration of Captain Lee, and pointed out with some degree of pride by his successor, Agent Williams, at the commencement of his term of service, seem to have been struck with blight during his administration, and presented a very sickly appearance at the time of my visit in 1890, the second year of Agent Ashley's administration, and in 1892 the last vestige, almost of house, tepee, and farm had disappeared.²¹⁰

The years 1890-1891 were a period of recouping the losses of 1888-1889. No rain fell in May and June of 1890; hence most of the corn

was lost, and half the oats. The drought-resistant wheat did well, but wheat production was mostly confined to the Seger Colony. The most promising development of 1890 was the sale by the Indians of 11,163 bushels of grain to dealers on the border of the reservation in central Oklahoma, which had been opened to settlement in 1889 by non-Indians.²¹¹

Difficulties of farming in western Oklahoma have often been associated with the semi-arid (or "subhumid") status of the region. Actually, as I shall show more fully in my next chapter, western Oklahoma farmers did not have a great deal of difficulty in adapting to relatively arid conditions. Their chief problem was that years of dryness were punctuated by years of excessive rainfall, so that their adaptations to aridity worked against them periodically.

In 1891, continuous rains in the early part of the year made for difficulty in the Indians' use of their cultivators, and many had to revert to the use of hand-held hoes. The Indians were largely successful in reclaiming acreages lost in 1889. Three thousand and six hundred acres were cultivated, and only a little over a hundred of the acres were abandoned in the course of the year. The corn harvest (23,840 bushels) was considered disappointing by agent Ashley, but the 3,590 bushels of wheat harvested represented a yield of twenty-three bushels per acre. The wheat land had been grazed throughout the winter. The fall of 1890 had been warm.²¹²

Fairly heavy grazing of acreage planted to winter wheat was common in western Oklahoma in the early decades of non-Indian settlement, in years of considerable moisture and warm autumns. The practice prevented the wheat from making so much growth that hard freezes caused great

injury to the crop. In the meantime, the dung of livestock fertilized the fields, and the action of hooves on the soil acted as a form of cultivation. The result explains the high yields reported for Indian farms in 1891.²¹³

The state of reservation agriculture seemed promising on the eve of opening reservation lands to non-Indian settlement in 1892. The circumstances of land opening themselves contributed to a major disruption of Indian agriculture in 1892. For instance, some Seger Colony Indians chose to get wages as guides for homesteaders looking for the best available lands in the area. Many other Indians in the Seger area were gathered into large camps by their leaders, for fear of conflict breaking out between young Indians and the homesteaders.²¹⁴ The next four years were a period of national agricultural depression, and neither Indians nor homesteaders made lasting progress.

The Cheyenne and Arapaho agent from 1893 to 1900 was Captain (later Major) A. E. Woodson. In the recovery year of 1897, Woodson blamed drought in 1895 and 1896 for the poor showing of Indian agriculture. His main excuse, however, was that the selection of Indian allotments had not been good for farming. The Indians, Woodson argued, had chosen allotment locations on the basis of good access to water and timber, rather than for best agricultural potential, and many selections had not even been by the Indians themselves, but by allotting agents from survey maps. Woodson attributed the recovery of 1897 to improved climate, but mainly to better attitude toward "civilization" on the Indians' part, and to the context established by allotment in severalty.²¹⁵

This was complete nonsense. The policy allotment in severalty, and

Woodson's civilizing of the Indians, did not bring about the recovery of United States agriculture in 1897, from one of its worst periods of depression. The 1893-1896 period had been especially hard on wheat farmers in Oklahoma and elsewhere.²¹⁶ The climatological argument cannot be completely ignored, but the reference to drought conditions by Woodson was more appropriate to the Darlington Agency vicinity than to the entirety of the reservation, as can be seen in the Following data:²¹⁷

<u>Reporting Station:</u>	<u>Year:</u>	<u>Annual Precipitation (inches):</u>
Fort Reno, Canadian County	1895	22.78
	1896	19.13
	1897	23.56
Arapahoe, Custer County	1895	31.03
	1896	25.19
	1897	26.69

It would seem that, if drought had really been a condition seen to be one justifying emergency measures, the proper strategy for 1895-1896 would have been to allocate more resources to Indian farms in the Custer County area. Over-expansion of farms in the Darlington vicinity could only have had deleterious effects. Woodson, however, had a policy of "rewarding the progressive by a generous issue of the articles furnished by the Government and imposing privation upon others who obstinately persist in refusal to adopt civilized habits...A deserving Indian is one who has established permanent residence on his allotment and cultivates the same in a proper manner."²¹⁸

In fact, Woodson was penalizing many Custer County Indians in allocation of agricultural resources. His policies were also forcing many Indian groups to divest themselves of implements along with other personal property purchased with funds obtained from the sale of

"surplus" Indian lands upon allotment in severalty. Woodson had decided that the practice of beef issue on-the-hoof was inhumane to the animals. Further, the practice of on-the-hoof issue lent continued strength to the authority of camp and band leaders. As many as 750 Cheyennes, under the authority of their traditional leaders, resisted issue to family heads from the block, preferring the older mode of issue to camp groups, on-the-hoof. By the time that Woodson got a final ruling from the Indian Office supporting his elimination of rations to camp groups, in the fall of 1896, he was able to note that the recalcitrants were "selling off everything they own" in order to survive.²¹⁹

One of the recalcitrant groups in Custer County comprised the Indians who had taken allotments along Deer Creek. After his triumph in receiving explicit Indian Office support for cutting off all on-the-hoof rations, Woodson sought to induce Deer Creek Indians to squat in elementary family units on their individual allotments. He offered to have rations sent directly to them at Deer Creek, so that the Indians would not have to go to the issue station located then at Arapahoe. This opened up more jobs for Indian freighters, so Woodson moved to restrict freighting contracts to men settling on and working their own allotments.²²⁰

It should be noted that "recalcitrants" were rarely recalcitrant in all matters of dealing with white authorities. The Indians who selected allotments along Deer Creek were associated with the authority of Young Whirlwind, who was one of the Cheyenne leaders most opposed to the allotment agreements in the first place.²²¹ The Cheyennes and Arapahoes had been supposed to take allotments in 1891, but many Cheyennes and

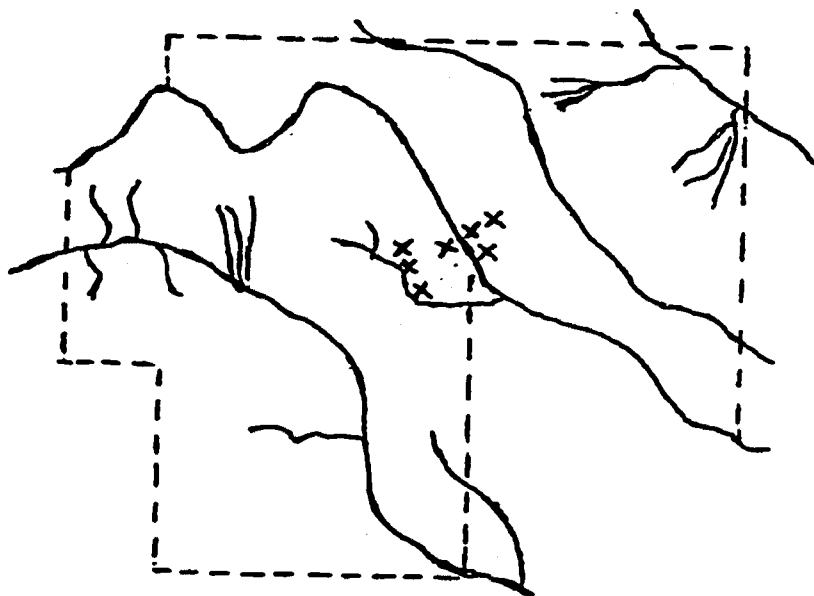
some Arapahoes were slow to accept allotments, and had not made selections before the appropriations for the allotment process ran out for 1891. The Interior Department, in January of 1892, warned the Cheyennes and Arapahoes to finish selection by the first of March, or be arbitrarily allotted by government agents.²²² As a result, many allotments, especially of Cantonment and Red Moon Cheyennes, were selected in February, leaving very few Indians still unallotted.²²³

The members of the camp led by Young Whirlwind did not wait until 1892 to select allotments. I think that the reason for this should be fairly clear. The locations of family heads of Whirlwind's camp (as listed in the 1892 Corrected Cheyenne Enrollment), in terms of allotments selected, are shown in Map XI. By comparing Map XI with Map IX in Chapter III, it can be seen that Young Whirlwind's camp members were distributing their allotments so as to secure title to the best stand of timber in western Oklahoma and Kansas. I doubt whether the group cared to jeopardize such claims by making futile gestures of protest. The distribution of the allotments of family heads, of course, does not mean that the group resided in elementary family units on dispersed allotments. We know that this was not the case for the Deer Creek Indians in the 1890s.

In general, it cannot be said that Cheyenne and Arapaho selections of land in allotment contributed to any great disadvantage in agricultural development. There is an odd myth, still perpetuated in the literature, that the Indian pattern of preferring lowland sites for allotments was a vast mistake. In a recent essay by Michael Reggio, titled "Troubled Times: Homesteading in Short-Grass Country," it is

MAP XI

1891 ALLOTMENT SELECTIONS BY FAMILY HEADS
OF THE CAMP LED BY YOUNG WHIRLWIND



Approximate Locations of Allotments = X

Sources: 1892 Corrected Cheyenne Enrollment (Seger Colony List); Cheyenne and Arapaho Allotment Rolls.

stated that "Settlers later realized that they held the best lands, because the surface water from the infrequent rains drained into these streams leaving the ground hard and dry. But, nevertheless, these early pioneers hated the Cheyenne and Arapaho for their ownership of the supposed 'best lands'."²²⁴

First of all, one might note that there has never been, either according to common parlance of farmers in the area, or according to formal ecological terminology, any "short-grass country" in western Oklahoma except in the Panhandle. The spread of stands of short grasses into western and central Oklahoma was regarded by farmers to be the spread of a disease, brought on by overgrazing.²²⁵ Even more odd, however, is the idea that sheet erosion of the western Oklahoma uplands was a lucky break for non-Indian farmers.

Burning and overgrazing of the uplands certainly caused considerable erosion. The field cover was removed at its base, so that nothing was left to bind the soil and promote humus accumulation. Early erosions of the developed soils actually enriched the lowlands with humus. It was only after the uplands were completely runied by erosion that the lowlands suffered, since it was only then that less developed subsoil elements were being washed into the lowlands.²²⁶ By 1930, both practical farmers and soil conservaton experts recognized that almost all land abandonment for reasons of erosion was taking place on the uplands.²²⁷

The main complaint of Woodson in 1897, was that the Indians had placed good water and timber above agricultural potential in their selection of allotments. Woodson seems to have been completely ignorant

of what was going on in western Oklahoma other than events strictly concerning Indian allotments. The early non-Indian settlers died in large numbers from typhoid, contracted by drinking from "sloughs, creeks, and open-dug wells."²²⁸ Moreover, proximity to sloughs and saline creeks exposed the homesteaders to serious malarial problems.²²⁹

The malaria problem had been compounded by 1895, in the view of the Oklahoma Territorial Board of Health, through progress in breaking of virgin soil in conjunction with excessive rainfall. Erosion generated more slough-like stagnant water situations. Malarial symptoms were compounded by the housing conditions of settlers squatting in dugouts and sod houses.²³⁰

The housing crisis among homesteaders indicates the critical importance of the other resource which Woodson denigrated, wood. Subsistence money and capital were raised by settlers near Watonga, in 1892-1893, primarily through illegal sales of cedar posts cut from the Gypsum Hills region. Most of this cedar did not serve to alleviate the regional housing crisis, however, since speculative middlemen found a market for it at higher prices in Germany, where it was used to manufacture lead pencils of good quality.²³¹ Throughout western Oklahoma, homesteaders who held onto their farms during the agricultural depression of 1893-1896 did so largely because they happened to locate near decent woodlots, and in areas from which town markets for timber and firewood could be serviced.²³² Traffic in black walnut timber, often illegally obtained from Indian lands, remained one of Oklahoma Territory's principal exports up to the time of statehood.²³³ Federal agents sometimes halted trainloads of timber from leaving the territory,

on the assumption that such large shipments must involve timber from Indian lands, but the U. S. Attorney could rarely build a case on suspicions and common-sense inferences.²³⁴

The Cheyennes and Arapahoes were not averse to selling timber. From the time of the first freighting contracts for the Indians in the late 1870s, Cheyenne and Arapaho freighters often cut timber and smuggled it into Kansas on their regular freight runs.²³⁵ Around the turn of the century, especially, the BIA tried to crack down on sales of timber by Indians from their allotments. The regulations of 1900, specified that only "dead and down" timber could be sold. The Cheyennes and Arapahoes, further, were expected to sell the timber and firewood in the open market, rather than through pre-arranged contracts.²³⁶ The legislation of reference in such restrictions was an Act of February 1889, which did not preclude private contracts.²³⁷

Indians were not always restricted to "dead and down timber." For instance, White Shield, of the Red Moon Cheyennes, was allowed to cut seventy posts for sale in 1901.²³⁸ In general, when the Indians did haul wood to market, they took care to cut it selectively and to dry it so that it would be readily marketable, "dead and down" timber hardly being marketable. As an alternative to cutting wood and marketing it themselves, Indians often arranged to have a white neighbor cut it and take it in exchange for good-quality breaking of Indian land. Watonga District Farmer Charles Ruckman, in 1902, estimated that such arrangements usually allowed the Indians to put four times more land into production than if they had tried to break themselves. Ruckman, however, disapproved of such arrangements, since they seemed to lessen

the Indians' self reliance.²³⁹

Vital as controlling woodlots was, for selling timber in the interest of surviving the agricultural problems of the early years of Oklahoma Territory, there were more important long-term reasons for locating farmsteads near stands of trees. Woodlots were vital to livestock raising, because they provided shade in summer and shelter in winter for stock.²⁴⁰

Besides sale of timber, wage labor was the important means for hanging on in the 1890s. White homesteaders commonly went to surrounding states to work.²⁴¹ Indians also attempted this, but efforts to make them squat on individual allotments involved withholding rations to families whose male heads were absent at the time of ration distribution. Many Cheyenne and Arapaho men attempted to get work in "Wild West" shows in the 1890s, which took them off-reservation.²⁴²

Public works were a means of getting subsistence that was looked upon with more favor by the Indian Office. In 1892, Cheyennes and Arapahoes were hired by Blaine County officials through the Indian Office to work on roads. The BIA paid the Indians in lieu of rations. The Indians, however, proved to be good and cheap workers, and were later able to supplement their rations through direct employment by the County Board of Commissioners.²⁴³

To be sure, some Indian wage labor of the 1890s was fieldhand work, as in picking cotton on white men's farms.²⁴⁴ Until the late 1890s, however, agriculture was not thriving among the whites any more than it was amongst the Indians. The homesteaders brought little capital into western Oklahoma. The earliest non-Indian settlers in Canadian County

had no cultivating implements at all, and planted what little seed corn that they could get by mounding sod over the seeds, in very primitive Indian fashion.²⁴⁵

Sodbusting did not take place at any great rate before 1897. The homesteaders had little money to hire professionals, and they lacked heavy plows, good draft animals, and skills required to break land for themselves. Most planting, therefore, took place on sandier upland soils which blew and drifted. Lacking seed drills, the wheat farmers broadcast the seeds into the high winds, and tried to drag small trees over the seed to cover it.²⁴⁶

In attempting to handle the harder sods, the homesteaders began the practice of cut-and-burn agriculture. This practice has often been condemned by soil conservation workers for its affect on humus in upper soil levels of uplands in western Oklahoma.²⁴⁷ "Slash-and-burn" (often called "swidden") techniques in better forested areas than western Oklahoma, have the benefit of leaving tree ashes on the ground, rich in calcium, phosphorus, and potash, so that the practice in more humid regions is not always condemned as a robber of soil fertility.²⁴⁸

The practice is not without its logic in western Oklahoma lands. Burning of weeds, mown pasture land, and stalks left in fields, resulted in more friable soils.²⁴⁹ In 1929, a Custer County farmer, R. E. Mason, argued that "Burning destroys growing vegetation and saves moisture so that the ground works down into a fine mulch and seedbed."²⁵⁰

Researches at the Oklahoma Agriculture and Mechanical College (now Oklahoma State University) determined that the decay of heavy waste straw on wheat land after combining led to serious reduction of

available nitrogen, so that burning was a better strategy than attempting to turn trash under with disk or mouldboard plow.²⁵¹ The same logic should have applied to early burnings in western Oklahoma of areas mowed for prairie hay.

The cut-and-burn practices were not confined to the uplands. There are some reports of Indians of Bridgport/Geary District burning in late winter.²⁵² Whatever the advantages of burning were, the short-term erosive effects were certain for upland areas. Given the lack of capital in the early and middle 1890s, farmers in western Oklahoma did not have many alternatives to cut-and-burn.

The upswing of better crop prices in the late 1890s did not make for immediate prosperity for western Oklahoma farmers. The population of Woodward County actually decreased from 7,487 in 1896 to 4,206 in 1898. Meanwhile, cattle operations in Woodward County were increasing. Woodward County homesteaders had hung on during the depression by cutting fence posts from stands of trees in canyons, and by working at wheat harvest in Kansas or other wheat states.²⁵³ Seemingly, the first good crops, in 1897, were used to commute homestead claims to purchase, or final proof on homestead claims was made in 1898, and many farmers sold out to cattlemen. They cut their losses and got out.

The year 1898, was somewhat of a disappointment, at least to wheat farmers. Hard-kerneled wheats, whether the spring Durums of the northwestern Great Plains, or the "Turkey" winter wheats of the south-central plains, are well adapted to dry-farming of semi-arid lands. The year 1898, was too moist, and the wheat grew up too rank for economical harvesting.²⁵⁴

It is uncertain exactly what was going on with Cheyenne and Arapaho agriculture in the late 1890s. In the recovery year of 1897, about 3600 acres were reported in cultivation. This is easily believable, since it meant that the Indians were returning to their pre-depression level of farming. An expansion to 6,299 acres in 1898, is unbelievable, since there is no evidence of a relatively massive injection of capital into the Cheyenne and Arapaho farming system at this time. Major George Stouch, upon relieving Woodson as agent in 1900, could account for no more than 5,230 acres under cultivation.²⁵⁵

Also incredible were the figures agent Woodson gave for residence. He stated that 95 percent of able-bodied males were living on their original allotments in 1899. Considering Woodson's poor record on housing starts, I see no rational basis for insisting on permanent residence in impermanent dwellings.²⁵⁶ I am certain that the Indians could discover no logic in it.

A more important consideration is that the vast majority of Indian allotments were suppositious farms. The term "suppositious" is taken from the terminology of city planners. The generation of "suppositious farms" is the rural equivalent of urban "premature subdivision."²⁵⁷ No system of roads and transport existed in the 1890s to give the vast majority of Indian allotments ready access to markets. No capital existed to start up farms for 95 percent of able-bodied adult males, and no working capital existed to keep them in operation. Certainly, no sanitary facilities or ready access to physicians existed that would make possible the occupation of the majority of family head allotments.

Allotment in severalty, for the Cheyenne and Arapaho tribes, meant complete extinction of corporate property. Allotment agreements specified a quarter section (160) acres of land for every Indian, even babes in arms.²⁵⁸ A farm of that size was too large to be operated in full by the average farmer of the late 1800s. Even if sufficient capital could be obtained to start-up a farm of a full 160 acres, the cost of labor, which was scarce on the Great Plains, was too high to permit full utilization of that acreage for the average farmer. One would have to assume a great deal of working capital was available, and that a ready market was always accessible for sale of harvests.²⁵⁹ Many of the homesteaders who made final proof on western Oklahoma quarter sections, making considerable improvements, had to sell out soon after making proof, to speculators usually, because they simply could not finance the working capital or hire enough labor to keep their farms in production.²⁶⁰

The quarter section was an awkward working unit. There is a limit to how many quarter sections can be packed into the best farming lands in any given area. Many Cheyennes and Arapahoes were faced with choosing allotments on land easily brought into production, or less easily cultivated land that was in reasonable proximity to the land of relatives and friends. Many Indians deliberately chose poor land in order "to be near a certain Indian colony or settlement."²⁶¹

There are many Cheyenne allotments that were taken in 1891-1892 on what is called the "north" side of the North Canadian River, in the present-day county of Blaine. In pre-allotment times, this area was shunned by Cheyenne farmers. In 1887-1888, the military authorities of

Camp Supply mapped the location of concentrations of what were termed "Indian gardens," in the Blaine County area.²⁶² Of the eleven concentrations, only two were on the north side of the North Canadian, and these two were at the bend of the river on the northern border of the reservation. Two of the "south side" garden sites were located in the Canadian-Port-Lincoln floodplain soil association, which is a very narrow band along the river channel. The other south side gardens were in the Grant-St. Paul soil association of the uplands. This association features deep, loamy soils, and the uplands in the area are fairly level. It is no mystery, then, why this area was preferred to the uplands on the north side of the river. The Shellabarger-Nobscott-Pratt association soils of the north side uplands are much more sandy than the soils of the south side uplands, and the northside uplands feature steeper slopes.²⁶³ Furthermore, prevailing winds create sand dunes on the north side of the North Canadian River in western Oklahoma.²⁶⁴ The large number of allotments taken on the north side of the river were suppositious farms.

The third and fourth levels of the South Canadian River valley have great agricultural potential. Bunchgrass species are prevalent: little bluestem; big bluestem; Indian grass; and switchgrass. These species generally attain only half the growth in upland areas that they attain in the third and fourth levels of the South Canadian River valley, with their high water table. Moreover, switchgrass reasserts itself readily after disturbance of the soil, so that abandoned fields in the area can more easily be brought back into production than in the western Oklahoma uplands.²⁶⁵

The first and second levels of the South Canadian River valley, however, are disastrous for farming. These levels are in a continual state of flux, resulting in sand drifts and occasional dunes. In spring, the water table is so close to the surface that the roots of woody species are destroyed. In late summer, the surface heat of the sand kills young seedlings.²⁶⁶ The many Cheyenne and Arapaho allotments on the first and second levels were suppositious farms.

A large number of Indian allotments on these levels were completely ruined by floods. On some allotments, most of the acreage was covered by sand; many allotments fell into the river. The worst damages occurred in areas supervised by the Bridgeport/Geary district farmers. The years 1906, 1912, and 1922 were particularly bad.²⁶⁷ Many non-Indian settlers in this area did not even try to sell what little lands they had left from floods, but simply abandoned them.²⁶⁸

7. Chapter Conclusion

From 1883 to the turn of the century, the Cheyennes (and the Arapahoes also, of course) made remarkable progress. From being sharecroppers on a single 100-acre agency farm, or else little more than subsistence gardeners, in 1883-1884, the Indians slowly consolidated acreage, and, in spite of periods of great setbacks, had control of about 5000 acres by 1900. I do not know how reasonable standards could be set which could lead to an evaluation of failure in farming.

Were the Indians, then, successful farmers? By no means. They had consolidated less than two acres per capita by 1900. It is the rate of growth, in the face of severe capital rationing, that I find remarkable.

The tragedy was that the capital rationing, except under Lee's administration, was not administered in an economically rational manner.

A. E. Woodson's administration was probably the most grotesquely irrational. Whether an Indian got a proper hair cut, as Woodson saw it, was more important than whether he showed genuine potential as a farmer.²⁶⁹

Most individual farming operations attempted by the Indians in the trust period did fail. What aggregate statistics sometimes lead uncautious observers to conclude is that the Indians failed where non-Indians succeeded. This was certainly never true in western Oklahoma. Most farming operations attempted by non-Indians failed as badly as most Indian attempts. The white failures simply turned over the land to other whites, and when these failed they turned over the land to still other whites. The Indians were neither sufficiently great in numbers, nor sufficiently in control of their lands legally, to imitate the whites by failing and turning over the land to other Indians at a high enough rate so that the lands were eventually capitalized sufficiently to yield Indian farmers an adequate income stream. In my next chapter, I shall examine the context of failure that prevailed generally in western Oklahoma farming in the first few decades of 1900s.

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- 259 Robert M. Finley, "A Budgeting Approach to the Question of Homestead Size on the Plains," Agricultural History 42 (April 1968): 109-114.
- 260 "Harriet Patrick Gilstrap Tells This Interesting Story," in Oklahoma--The Beautiful Land, p. 311.
- 261 Records, "Recollections of April 19, 1892," p. 17. Former Cantonment Agency employee Ebenezer Kingsley was the source of Mr. Records' information.
- 262 Carriker, Fort Supply, pp. 174-179.
- 263 See Blaine County "General Soil Map" (compiled 1967), U. S. Department of Agriculture, Soil Conservation Service, in cooperation with the Stillwater Oklahoma Agricultural Experiment Station.
- 264 Graves, "Influence of the Canadian Rivers," p. 4.

- 265 Clyde L. Porter, Jr., "An Analysis of Variation between Upland and Lowland Switchgrass, *Panicum virgatum* L., in Central Oklahoma," Ecology 47 (Autumn 1966): 981, 985, 987, 990.
- 266 George H. Ware and William T. Penfound, "The Vegetation of the Lower Levels of the South Canadian River in Central Oklahoma," Ecology 30 (October 1949): 479-481.
- 267 Bridgeport District Farmer John Logan to Concho Agent Charles Shell, 12 September 1906; Logan to Concho Agent William Freer, 7 May 1912; Concho Agent L. S. Bonnin, "Circular to Arapaho Chiefs," 14 March 1922; CAA, File "Allotments," OHSAMD.
- 268 Ibid., Bridgeport District Farmer John Logan to Concho Agent Charles Shell, 11 September 1906.
- 269 I have chosen not to dwell on some of the more ludicrous aspects of the Woodson administration. The haircut rule was promulgated toward the end of his term as agent. Agent Stouch never seems to have tried to enforce it with great rigor. Woodson had wanted all Indian Office support cut off to able-bodied Indian males with long hair, but Indian Office policy was never so severe. In 1902, Bridgeport District Farmer John M. Tyler was so fed up with the matter that he wrote to Stouch as follows:
- I have Indians here who wear long hair and have done so all of their lives and who are my best workers...in my opinion, compulsory hair cutting would deter their advancement at least for years. I have been asked these questions many times: "If it is wrong to paint why do white women use paints or powders. If it is unhealthy and unclean to wear long hair on the head why is it not so to wear heavy growths upon the face as white people do?"
- See Commissioner of Indian Affairs to Stouch, 4 January 1902; Commissioner to Stouch, 21 January 1902; Bridgeport District Farmer John M. Tyler to Stouch, 19 June 1902; CAA, File "Indian Customs," OHSAMD.

CHAPTER V

ECOLOGY OF FARM FAILURE IN WESTERN OKLAHOMA

...it is difficult to argue that, even with inflation, building maintenance costs and taxes alone exceed rent rolls, even under the most restrictive implementation of rent control. As a consequence, the "rent gap," where it has existed, has long ago been capitalized in lower building acquisition costs and does not represent an ongoing burden to the present generation of landlords.

--Salins, The Ecology of Housing Destruction, p. 6.

1. Chapter Preface

Explanation requires providing context, comparison, and contrast.

I prefer to weave the context of general farm conditions in western Oklahoma into the history of Cheyenne farming, rather than describing it separately. I believe that a relatively short chapter devoted to non-Indian problems might be in order, however. What I will show is that the majority of non-Indian farming operations in western Oklahoma failed before 1930.

Aggregate statistics may hide this fact. In Chapter II, I referred to work by the economist Leonard Carlson which seemed to indicate that Indians were doing less well at farming than were non-Indians, in Oklahoma and elsewhere. Carlson, however, was not comparing the same populations over time. To compare similar populations, Carlson would have had to keep track over time of homesteader cohorts. If one deals with Cheyennes allotted in 1891-1892, then one should deal with the

original set of white settlers who came into northwestern Oklahoma, largely in the decade following opening of Cheyenne and Arapaho lands.

There is no controversy possible over the fact that most of these pioneers failed. In 1919, at the end of the greatest era of prosperity for western Oklahoma farmers before World War II, the Department of the Interior encountered some statistics from Oklahoma that led the Department to reevaluate its role in settling the public domain.

Oklahoma was not the only area that seemed to have been blighted by poor settlement policies, but the available statistics for Oklahoma seemed the most startling. Of the "free" farms claimed in Oklahoma by non-Indian settlers, 104,000 were occupied by tenants in 1919. 95,000 farms were still owner-operated, but 80 percent of these were mortgaged. The first mortgages ranged from 40 to 60 percent of the lands' cash values.

On the basis of such reports, Secretary of the Interior Franklin Lane offered a new policy, on the assumption that veterans of World War I would be settled in large numbers on the public domain. The isolated homestead would no longer be the land unit for settlement. "Community settlements," nucleated villages, would be the residential units, and they would be located so that good access to municipal centers would be possible. Farm acreages would be restricted so that there would be no incentive to over-expand production, and to incur indebtedness to finance the over-expansion. Cooperation among farmers would be encouraged in order to cut capital costs.¹ This, of course, was the kind of scheme that Jesse Lee was trying to work out with the Cheyennes and Arapahoes in 1886. The "Lane Plan" was rejected in 1919, but it came

much too late for western Oklahoma, anyway, and certainly much too late for Cheyennes.

The Interior Department diagnosis of failure was echoed in the opinions of Oklahoma farmers themselves. In early 1919, John Geissler, a Cotton County farmer, wrote to the Oklahoma Farmer-Stockman as follows:

It is only a few years since the United States government gave 160 acres of land in Oklahoma to anyone who wanted it, and today 60 percent of those who accepted the offer are tenants, and 25 percent have big mortgages on their lands and a harder time to make ends meet than the tenants.

....
Most of the old homesteaders lost their land through mortgages held by mortgage companies, banks and individuals...and in many cases these mortgagees sold the land at a loss.²

Though farmers failed, it would not be correct to say that farming failed in western Oklahoma. Productivity and output kept going up. Resources were being concentrated in fewer and fewer hands. Operations grew in scale. What was gradually lost was the small-farmer's concern with yield-per-acre. Yield-per-acre fell as output rose.³

The situation resembled that described for urban slums by Peter Salins,⁴ in The Ecology of Housing Destruction, in terms of the way property turned over. The low income stream, considered on a per-acre basis, was capitalized through numerous turnovers of land ownership at low acquisition costs. The acquisition costs were low, despite both nominal and real increases in the value of farm lands. The persons buying the land operated on larger scales than earlier owners, and could hire capital more easily than earlier owners. Acreage expansion off-set declines in yield-per-acre. Toward the end of the 1920s, great acreages

were being invested in by absentee urban landlords who could get capital on much better terms than rural operators.

Difficulties in adapting to the physical environment played a role in the high rate of farm failures. It was a very complex role, however. Essentially, the western Oklahoma farmer made a very good adaptation to the farming of semi-arid lands. The trouble was that climatic conditions did not always remain arid. Years of drought could be survived, but the adaptations that farmers made to semi-arid conditions left them very vulnerable to years of excessive rainfall. To adapt to both kind of conditions adequately required more investment than most small farmers could finance.

The chief mode of adaptation to the physical environment was through reliance on drought-resistant crops, and I shall discuss these crops first. Next I will explore some of the difficulties involved in livestock raising. Then the topic of variation in precipitation will be addressed directly. The discussion of the effects of climate will lead, more naturally than one might expect on the basis of logic alone, to the consideration of how western Oklahoma farmers failed to achieve viable rural communities.

2. Crops

Nineteenth century cattle corporation propaganda, and the primitive land classification schemes of the Department of the Interior, had a hold on the popular and scholarly imagination that reached well into the 20th century. Fred Shannon, in his 1945 book, The Farmer's Last Frontier, stated that lands west of the 100th Meridian were virtually

impossible to farm without irrigation, that "the western land was a natural pasture."⁵

In a recent study by Robert J. Stahl of farming development by Kiowa, Comanche, Wichita, and Apache Indians, whose reservations bordered Cheyenne and Arapaho lands on the south, the logic of the 100th Meridian is extended eastward into southwest Oklahoma. Frequent droughts, the unsuitable character of the land for crop-raising, and its greater suitability for cattle ranching, are brought forward as reasons for the poor performance of Indians in southwestern Oklahoma at farming. It would be gross misrepresentation, however, to say that Stahl's work relied primarily upon the aridity of western Oklahoma to explain poor development in crop-raising. He describes also the ill-effects of fluctuating federal policies, frequency of change of reservation administrations, BIA corruption, BIA opposition to cooperative farming practices among traditional Indian communities, and slow development of marketing and transportation facilities in western Oklahoma.⁶

It is simply not true that farming without irrigation was impossible west of the 100th Meridian, or extremely difficult in western Oklahoma, or that the areas were better suited to cattle ranching, on any simple climatological grounds. It is true that farmers in the northwestern plains had great difficulty in introducing crops adapted to the aridity of that region. The farmers of the south-central plains had less difficulty getting the crops. The great problem on the south-central plains was that the area was not as consistently arid as it ought to have been in order to establish a stable cropping regime.

Average annual rainfall at the 100th Meridian, for the vast

majority of reporting stations, has consistently been about three inches greater than in the prime Russian wheat producing Volga region. The Agriculture Department began to attempt to promote the use of strains of hard Russian Durum wheat (a spring-growing wheat type), in the northwestern plains as early as 1864. The hard-kerneled Russian wheat strains were drought resistant and yielded more bread-loaf per unit of grain than soft wheats, thus providing small farmers with a good chance at dry-land farming in the arid west. The new wheats required investment and retooling, however, on the part of millers, since longer tempering and higher milling were required. Bleaching processes were also called for, since whiteness in flour had come to be identified with purity in the American market. Large eastern mills fought the hard wheat movement until strains were bred up that overcame some of the requirements for longer tempering and higher milling, in the second decade of the 20th century.⁷

Promoters of immigration of European groups into the northwestern Great Plains, especially the Northern Pacific Railroad, made an early mistake in playing up the prosperity of river valley settlements. The Santa Fe Railroad, and other Kansas promoters, aimed their propaganda specifically and realistically at European groups with a proven record of great capability for dry-land farming. The greatest prize were the German Mennonites who had made such a remarkable success in pioneering in arid regions of the Russian Empire. The Mennonites chose Kansas primarily for the bluestem bunchgrasses of the western areas of the state, the same grasses that were dominant in western Oklahoma.⁸ The "Turkey Red" winter wheat complex that the Mennonites brought with them

into the south-central plains was immediately prosperous, and much more readily influential than Agriculture Department demonstrations in the northwestern plains.⁹ The south-central plains saw the development of an indigenous milling industry for hard-kerneled wheats, one which found a market in Europe for its products by the 1890s.¹⁰

Winter wheat was the salvation of many early Oklahoma homesteaders. The Rock Island Railroad took the unsecured notes of poor farmers in Canadian and Kingfisher county areas, in 1891, in return for seed wheat. The farmers could not raise the seed that year, so the Rock Island provided more seed for unsecured notes in 1892, and the harvest from that year's sowing paid off almost all the notes.¹¹

Hard winter wheat dominated all other crops, with the exception of corn in the river valleys, in western Oklahoma before statehood. This circumstance prompted some Oklahoma Territory newspapers to argue that a fetish for wheat production was retarding the progress of western Oklahoma farmers toward diversification. It was considered especially bad that the wheat emphasis seemed to cause neglect of investment in livestock.¹²

Actually, such a state of affairs was dependent upon rainfall fluctuation and the relative mildness of falls and winters. I have already alluded to this in my discussion of the progress of winter wheat production on the Cheyenne and Arapaho Reservation, for the 1890-1891 season, which was presented in Chapter IV. Hard-kerneled wheats are excellent in drought years, but very hard to harvest in years of relatively abundant rainfall, when they grow up very rank. Sometimes the concentration on hard winter wheats almost forced western Oklahoma

farmers to invest in livestock or rent out their wheat lands for winter pasture:

One of the greatest benefits derived from wheat culture in Oklahoma has been the winter pasture which it has afforded for all kinds of livestock. Indeed, in some instances, it has been absolutely necessary to pasture wheat in the early winter season in order to prevent it from shooting, but this was after an unusally wet autumn season.¹³

The need for farm livestock, though often less for trade or consumption than for breeding suitable draft animals, was the same thing to a pioneer Great Plains small-farmer as the need for an adequately drought-resistant feed crop. The lack of such a crop was another important factor in the retardation of small farm development in the northwestern plains. It was not until the example of success with grain sorghums in western Oklahoma in the late 1890s, that northwestern plains farmers found the needed feed crops.¹⁴

The development of the grain sorghum complex was one of the few instances in which western Oklahoma led Kansas in innovations. "Rice corn" or "Jerusalem corn" was successfully introduced into eastern Oklahoma ("Indian Territory") in the early 1880s as a feed crop. By the 1890s "Kaffir corn" and "Milo maize" were popular in western Oklahoma. All the major grain sorghums (often called "the kafirs"), like the hard-kerneled Russian wheats, have the discourtesy to ignore the impassable barrier of the 100th Meridian, doing very well in regions of as little as fifteen inches of average annual rainfall. The grain sorghums, sometimes called "camel crops," are excellent arid-land grasses: low in transpiration ratio; extensive in root system; dormant during droughts; and, resiliently regrowing from tillers and branches

when rains occur. They are in fact of the same "tribe" of plants as the bluestem bunchgrasses that are dominant in the mixed-grass prairies of western Oklahoma and central Kansas.¹⁵

Unlike winter wheat, the grain sorghums are warm-season perennials. The sorghums, however, are not much affected by frosts. Some farmers actually preferred to let their late feed crops become frost-bitten. The brittleness made binding and shocking easier.¹⁶

The relative invulnerability of the sorghums was not always to the farmer's liking. Many conditions of climate that farmers with other crops in other regions find very favorable, great soil moisture, and mild falls and winters, may be as damaging to western Oklahoma farmers in terms of their grain sorghum crops as they can be to winter wheat. This was also the case with the use, by western Oklahoma farmers, of grasses of the "Grama tribe," most prominently Bermuda grasses, which were used for their sod-forming propensities in attempting to halt gullyng. The durability of certain sorghums, especially Johnson grass, led to their being classified as pests. Bermuda grasses were often put into the pest category. Farmers could not fit them into crop-rotation systems.¹⁷

In years of abundant rainfall and warm autumns, Johnson grass could only be eradicated by poisoning the ground with sodium chloride or worse chemicals. Farmers took advantage of years in which late summers were very dry and winters brought hard freezes. They cultivated shallowly in the summer so that grain sorghum root stocks formed near the surface, instead of penetrating the subsoil. This exposed the root stocks to dry falls and freezing winters that killed the plants at the root.¹⁸

Around the turn of the century, to some observers of western Oklahoma farmers, it seemed that grain sorghums would lose ground to the more traditional feed crop, maize. George I. Bishop, writing in 1904, of Washita County conditions, attributed the supposed reversion to mere stubborn conservatism. The grain sorghums were much more drought-resistant than most corn strains, though corn was a slightly better feed.¹⁹

Bishop's assessment was almost certainly incorrect. The following are the acreages of major cash and feed crops in Washita County during the last years of Oklahoma Territory:²⁰

<u>Crops</u>	<u>Years</u>			
	<u>1904</u>	<u>1905</u>	<u>1906</u>	<u>1907</u>
Corn	62,833	62,022	60,190	74,352
Kafir Corn	11,779	7,178	5,880	8,840
Milo Maize	?	3,927	1,637	361
Oats	410	17,805	29,925	8,773
Winter Wheat	4,092	38,045	41,751	29,306
Native Grasses	3,763	1,835	2,605	?
Alfalfa Hay	1,435	1,790	3,287	4,618
Cotton	69,128	152,580	62,281	51,363

No fancy statistical analysis is necessary to see that maize was not in great competition with grain sorghums. Other feed crops, most obviously oats, would seem to have been the real competitors.

Of course, these statistics are subject to all the difficulties usually associated with aggregate statistics, whether descriptive or inferential. What was actually going on in Washita County is hard to determine. Certainly, some farms were failing, others were being started; some farmers were switching from one crop to another. Whether abandonment and start-up, or farms changing operators, or farmers switching crops, or all such activities, contributed to the changing

crop acreages, cannot be determined from official statistics.

Statistics for Oklahoma Territory, and from the early years of the state of Oklahoma, were best taken with a grain of arsenic as well as a grain of salt. The Territorial Board had difficulty in gaining the cooperation of county assessors. Cooperative county clerks often stated that the assessors were producing little data of value, anyway. More direct contact with farmers, undertaken by the State Boards of Agriculture, brought the realization that many farmers did not want the state to have good data. Farmers were frightened that speculators and manipulators would find the data too useful.²¹ Similarly, the Indians of Calumet District resolved, in early 1917, to make a deliberate show of disinterest in farming, lest the Competency Board find them all competent, issue them patents, and force them to pay taxes.²² It was not always in the farmer's interest to have officials get too accurate a picture of their operations.

In broad areal distribution, grain sorghums developed (most strikingly by the middle 1920s) as competitors of winter wheat in southwestern Oklahoma. The essential geographical differences in crop distributions, however, were related to river valley locations. Corn production became concentrated, almost confined, to valleys and main tributaries of the Washita, Canadian, and Arkansas Rivers (less concentrated along the more saline Cimarron River). Corn production also showed concentration along the Red River in southeastern Oklahoma, but not along the Red River in the southwestern part of the state. This was because the corn and cotton distributions were disjunct.²³

By 1907, most of the production of cotton in the Oklahoma area was

in the southwestern region. Eastern Oklahoma (Indian Territory) had earlier been a major cotton producing area, but cotton had been only one component in the diversified farming of that region. Western Oklahoma farms usually had a greater proportion of acreage in major cash crops, wheat or cotton.²⁴

The areal distribution of grain sorghum production was not, at first, closely bound up with that of cotton. By the middle 1920s, however, sorghum acreage was markedly concentrated in the extreme southwestern corner of the state, as well as the Oklahoma Panhandle.²⁵ In the 1920s, instability of international markets made attractive the use of wheat and cotton as alternate cash crops, rather than merely alternative cash crops. If it appeared that there would be a glut on the wheat market, southwestern Oklahoma farmers could plow up the wheat in the spring and get a cotton crop planted. They could then drill wheat in the cotton stalks in the fall.²⁶

The year-to-year alternation did not work well. The shift from one crop to another was too extensive, since the oversupply of one crop in one year was met by an oversupply of the other crop in the next year. Late in the 1920s, but too late, cotton growers attempted to balance the shift over two year periods, "trying to spread the marketing of their surplus cotton out over that second year in order to take advantage of the rebound in price."²⁷

The situation was complicated in the World War I era, by the desires of southwestern Oklahoma farmers to free acreages that had been reserved for grain sorghums and other feed crops, for cash crop planting. They switched in large numbers to soft winter wheats, which

made better pasture. Thus wheat became the competitor of grain sorghums in southwestern Oklahoma, and the sorghums became more concentrated in the extreme southwestern corner of the state. The Official Grain Standards Act made the central-western part of the state an area of uncertainty for farmers in the World War I period. Soft and hard wheats could not be mixed, and farmers had to experiment to determine how far north the soft wheats could be pushed (colder winters were a limiting factor).²⁸

Northwestern Oklahoma farmers began to experiment with greater cotton production by the middle 1920s. The northward advance of cotton proceeded despite warnings by farm leaders that the climate was less suitable, labor for harvest scarcer, and cotton gins poorly distributed.²⁹ The northwestern Oklahoma farmers threw their weight into the year-to-year swing from cotton to wheat and back to cotton, thus making the market oscillate even more wildly.

The lowland areas of western Oklahoma were somewhat insulated against these oscillations by the continuing emphasis on corn. Only the Washita River valley, however, was spared the boom and bust to any great degree. Farmers on the most productive soils in Oklahoma, which are located in the Washita valley, have always resisted trends toward specialization. The continuing tradition of diversified farming has been associated with one of the most stable populations in the state's history.³⁰

In summary, the crops adopted by the western Oklahoma farmers were adequate adaptations to frequent droughts and not greatly affected by the occasional severe winter. Abundant rainfall and mild winters,

however, could easily disrupt the pattern of adaptation. The only defense the western Oklahoma farmer has devised against the possibility of wet weather in addition to the possibility of dry weather has been to minimize cash cropping, diversify operations, and furnish local markets with such items as milk and eggs. This has worked best in the Washita River valley. In any case, the greatest difficulties with respect to crop-raising emphases have been on account of market instability; not on account of variability of climate.

3. Livestock

The range cattle industry of the southern plains has been subject in this century to what has been called a cycle of "grass inflation" and "grass depression." This means that the ecological situation has historically been one in which greater rainfall than average over a period of years has given rise to thicker growths of grasses. Cattlemen, in such periods, have raised money rather easily, increased herds considerably, and reduced acreage devoted to feed crops. The greater growths of range grasses however, have included many low-nutrition weeds. The periods of greater-than-average rainfall have been followed by years of below-average rainfall, which have caused cattlemen to sell breeding stock in order to refinance operations, as the effects of overgrazing become apparent. The decrease of herd quality carries over into the next period of above-average rainfall years, likewise the effects of overgrazing. The grass seems to grow up as thick as ever, but the abused range carries a higher proportion of low-value weeds, annuals displacing perennials.³¹

In western Oklahoma, the runs of dry years and runs of wet years have been remarkably regular. They have been related to sunspot cycles very closely by speculative climatologists. Thus, 1886-1897 were years of below-average rainfall, the years of 1898-1909 almost all of above-average rainfall. The years 1910-1919 were mostly dry, 1920-1929 wet, 1930-1940 dry, 1941-1951 wet.³²

There has been a complex interaction of effects on floral species distributions, caused by the cycles of excess-rainfall/drought and grass-inflation/grass-depression. For instance, Victor Shelford, in his book The Ecology of North America, largely on the basis of Hays, Kansas Experiment Station data, describes the dust bowl era (1933-1940) of the south-central plains as one in which little bluestem (Andropogon scoparius) should have disappeared by the end of the era from the uplands of more western pasture areas. Big bluestem (Andropogon gerardi), however, should have been a more resistant dominant of the mixed-grass prairie.³³ On the basis of characteristics of the grass-inflation/grass-depression cycle, the bluestems should have been resurging toward the end of the dust bowl period, since the herds would have been reduced well before the drought period came to an end.

In his 1940-1941 study of "The Spermatophyta of Custer County, Oklahoma,"³⁴ Leo Mericle found the little bluestem species confined to the uplands of northwestern Custer County. Big bluestem was no longer detectable anywhere in the county. This would have been the prediction on the basis of the grass-inflation/grass-depression cycle, the extinction of big bluestem being part of the general downward trend in range quality. The resurgence of little bluestem would have been

confined to western areas, despite Shelfords analysis on the basis of climatic conditions alone, because the western uplands would have been the first area to be impacted by the grass depression, because of its greater aridity. Herds would have been reduced in the west earlier.

Not all species were distributed in such a seemingly paradoxical fashion. For instance, Sorghastrum nutans (Indian grass) was not detected in Custer County in 1940-1941. This would have been predictable on climatological grounds, while, on the basis of grass-inflation/ grass-depression alone, Indian grass might have been resurging by the end of the dust bowl period. The effects of the overlapping cycles have been all the more complex because overgrazing favors certain prairie climax species while drastically decreasing others, simply on the basis of which species, livestock, especially cattle, prefer to graze.³⁵

What, exactly, does "overgrazing" mean? At most Agriculture Department Experiment Stations on the Great Plains, the absolute minimum number of acres of pasture per head of cattle necessary for stable breeding herd maintenance, has been determined to be seven acres of pasture per head. This figure is too low unless a considerable acreage of feed crops is successfully grown. The feed crops are always necessary for supplementing winter diets, and they must act as a reserve in the case of severe drought.³⁶

This figure fits well with the long-term experience of many "safe" farmers in western Oklahoma. In a 1917 article on one such farmer, Clarence Roberts of the Oklahoma Farmer-Stockman noted that farmers not content to keep their herds at the level implied by the minimum figure

of six to seven acres per head, and farmers that neglected feed crops, were having to sell off their best breeding stock.³⁷

The necessity for considerable feed crops is commonly put in terms of the need for winter maintenance. Actually, in western Oklahoma, pasturing livestock heavily in early spring has often damaged native grass stands. Thus, when winter wheat pasture was utilized, farmers often kept livestock on the wheat land through early spring, until native grasses made good stands. The result of this was that the wheat was often damaged, since it generally made its best growth in early spring.³⁸ When the Cheyennes bought new teams, they made a practice of waiting until spring to purchase them.³⁹ Possibly, this was the pattern amongst non-Indians also. The price per head of horses tended to rise steeply from January to April, then level off until July, when the prices began to decline.⁴⁰

The southern Great Plains is not, and has never been, a region good for maturing cattle. Cattle are still shipped east to be "fattened" on tall-grass pastures. Even when breeding herds only are maintained, considerable acreage has to be kept in feed crops, or working capital kept on hand to buy feed crops from farmers. If a southern plains rancher wishes to mature the cattle on his own property, acreage in pasture must be sacrificed to acreage in feed crops or pasturable wheat land. Colorado cattlemen have the best record in this century for crop-raising as a necessary supplement to maturing cattle in the west.⁴¹

It becomes unclear, then, how it could be said that western lands are one great pasture, or that the land is better suited to livestock raising than to crop raising. When the terms of this concept are put

into ecological context, the concept becomes almost self-contradictory. Livestock raising in the region can only be successful, in the long run, if feed crops are raised in considerable quantity. Cheyenne and Arapaho Agent Dyer grasped this fact easily in 1884. Many cattle ranchers went broke over the next half century before the lesson began to be generally learned.

The other side of the coin also represents money. In the 1920s, farmers in northwestern Oklahoma began to learn that cattle raising could improve crop raising. A couple of decades later, the lesson was learned by corn farmers that grasses, native meadow or cash-crop small grains, could play an important part, along with legumes, in raising corn yields.⁴² Wheat farmers, in the 1940s, came to realize that native grasses, in rotation with cash-crops, could not raise cash-crop yields unless legumes also were in rotation, but that, even without legumes in the rotation, the native grasses helped prevent erosion, and made the soil more granular and easy to handle.⁴³ The discoveries of the 1920s were in another context, however, involving the concept of "intensive fallow."

"Fallow" before the 1920s, was almost an unmentionable word to western Oklahoma farmers. C. W. Maxey, writing in the Oklahoma Farmer-Stockman in 1922, expressed the feeling that "About 50 percent of the farmers of this locality raise a crop of weeds on the land before they get the land plowed for another crop. This tax on the moisture supply is almost equal to another crop of wheat."⁴⁴ This is hardly a profound ecological analysis. It does, however, indicate how long a field needed to be abandoned before its productivity was severely

damaged, and the peculiarities of secondary succession in northwestern Oklahoma gave poorly productive annuals like wiregrass a strong hold on the land: one season.

Some interest, nevertheless, in the concept of "intensive fallow," began to be manifested in the 1920s, beginning in the Oklahoma Panhandle and Woodward County. This interest developed after the failure of winter wheat in the 1922-1923 season, which led to "forced fallow" of acreages in the summer of 1923. The harvest of 1923-1924 that followed the forced fallow was surprisingly good for many farmers.⁴⁵

Intensive fallow was not simple seasonal abandonment. It was, rather, a component in an evolving crop rotation pattern. It often required disking or harrowing the soil crust of the fallow field after every rain, and disking whenever weeds started. The rotation basically involved a three- or four-field "wheat-Kaffir-cattle" layout of the farm.

The 1924-1925 wheat season was a disappointment to many northwestern Oklahoma farmers. They began to adopt the intensive fallow system that was being developed in the Panhandle and in Woodward County. Intensive fallow was being tried as far south and east as Blaine County in 1925. In these more southern and eastern areas however, farmers often preferred to use the lister in July, and split the ridges in August, before finally harrowing the ground level.⁴⁶ Thus, intensive fallow began to develop as an extension of early preparation for wheat.

By 1926, farmers relying heavily on the lister were trying what they considered to be a "new way" of fallowing. Grain sorghums were

lister-drilled in rows about six feet apart in summer, and the intervening areas were tilled, first with harrow and corn cultivator, then later with tandem disk. Thus, by fall the farmers had a feed crop for livestock and land prepared for winter wheat pasture.⁴⁷ It should be noticed that the increasing emphasis on livestock, especially cattle, in the development of intensive fallow was never consciously the main object of the practices; the primary goal was increased wheat yields.

Tests at the Panhandle Agricultural Experiment Station in the years 1924-1928 indicated the values and limits of intensive fallow. The moisture, and the availability of nutrients to crops, of two seasons, were, in a sense, combined, and the product of both seasons could largely be realized as a single, continuous operation (in terms of more efficient livestock production at least). The success of summer fallow, however, was found to depend on the character of seasonal variation of rainfall. Fallow was efficient only "if the land enters the fallow season with a low moisture content in both topsoil and subsoil and excessive rainfall does not more than saturate the root area before planting time of the next crop."⁴⁸

It should not seem strange, by this time in my discussion, that an observer of conditions on experimental fields located west of the 100th Meridian, should be concerned about problems of "excessive rainfall." The dilemma of the western Oklahoma farmer was, and still is, that there are important reasons for evolving adaptive strategies oriented toward defense against the effects of frequent droughts, but heavy investment in such strategies results in great vulnerability to conditions of years of relatively abundant rainfall. Angus McDonald summarized the

situation of western Oklahoma farmers in the territorial years by saying that "In dry years the soil blew away; in wet years it was washed off. Efforts to control one of the evils frequently accelerated the other."⁴⁹

Failure to recognize this feature of south-central plains farming adaptation led the geographer Thomas Saarinen to evolve a complex theory. He used personality traits and postulated perceptual mind-sets, in order to explain the fact that Great Plains farmers commonly underestimated "drought hazard."⁵⁰ Farmers who estimated the dangers of drought very highly, to the extent of neglecting terracing or proper drainage systems in the anticipation of years of excessive rainfall, probably failed long before they got a chance to take Saarinen's perception and personality tests in the 1960s.

One fact that Saarinen discovered, however, is interesting. This is that livestock specialists may have a tendency to react less readily to the danger of drought than crop-raisers.⁵¹ He admitted to having some difficulty in explaining this tendency. I should assume that the relatively long-term nature of the grass-inflation/grass-depression cycle is involved.

Up to now, I have been using the term "livestock raising" when I usually meant cattle raising. I do not wish to imply that all forms of livestock raising presented the same problems, or as great a general threat to the environment, as the cattle industry. The relatively low rainfall of western Oklahoma is associated with grasses and legumes higher in calcium content than in phosphorus content (the reverse is true to a small extent in the wetter climate of eastern Oklahoma)⁵² The supply of phosphorus is most critical for cattle nutrition.⁵³ Calcium

is more important in horse nutrition. In any case, the horse is generally a better pasture animal than the cow:

No one feed is as complete a ration for the horse as good pasture grass, or good grass or legume hay of the current season's crop.⁵⁴

There were conditions in some areas of western Oklahoma that made the raising of any great number of various livestock very difficult and risky. I speak primarily of the river valleys, since floods were great problems. This was especially true of the Washita River valley, where negligible acreage was devoted to pasture before the introduction of flood-resistant Midland Bermuda grass after World War II. The beginning of the first major upstream watershed flood control project in the United States, in 1946, in the Sandstone Creek area, just west of Hammon, Oklahoma, also helped to improve the state of livestock raising in the Washita River valley.⁵⁵

It is indicative of BIA inability to see Indian farming progress within the general context of western Oklahoma land use, that Red Moon Agency Cheyennes were hounded throughout the early 1900s for not being great livestock raisers in the Washita River valley (unless one counts poultry production).⁵⁶ They were not great livestock raisers for the same reasons that their white neighbors were not great livestock raisers, in the long-term (ranchers from outside the valley area did rent a great deal of the land for short periods).

In all the complaints and reasonings by BIA officials over the poor showing of livestock raising by the Red Moon Indians, the types of livestock most mentioned were horses, cattle, and poultry. Swine were not given much consideration, if any. Swine are the only animals in

particular who pasture exceptinally well on mixed grasses, and that is the composition of western Oklahoma native pastures.⁵⁷ Furthermore, swine do exceptionally well on maize as a feed, and maize is what the Indians grew best.⁵⁸ Swine can be infected with tuberculosis through contact with cattle or humans, but, unlike cattle, swine are not natural carriers of tuberculosis that is highly pathogenic for humans, and tuberculosis was a major killer of Cheyennes and Arapahoes in the early 1900s.⁵⁹

4. Precipitation

Western Oklahoma farmers, and Oklahoma farmers in general, learned by experience that annual rainfall figures did not necessarily reflect actual farming conditions, and did not have any close bearing on crop yields. They came to believe that rainfall distribution within the year was of greater importance than annual totals. Being farmers and not scientists, for the most part, they thought of temporal distribution of rainfall in terms of seasonal variation. Thus, in Janury of 1919, the Oklahoma Farmer-Stockman summarized the state of precipitation in 1918, by noting that many counties had had above-average annual rainfall, but that most of the rain had come too late in the year. It was supposed that farming in the spring of 1919, would profit from this rainfall more than 1918 farming had; the moisture would still be there in the subsoil, to some extent.⁶⁰

By 1922, Clarence Roberts, of the Oklahoma Farmer-Stockman staff, thought that enough reliable crop-yield data was on hand, and enough counties had been reporting monthly rainfall for a sufficient period of

time, to permit some elementary statistical analysis of the affects of seasonal rainfall patterns on crop yield. He chose to work with data on corn yields. Maize was the most prominent crop that was not especially drought-resistant, and it was not one of the winter-growing crops. Corn crop yields (bushels-per-acre) were averaged over twenty-one counties, chosen from every subregion of Oklahoma. The counties were not selected randomly; Roberts tried to choose counties in which a considerable amount of corn was grown (this was impossible for the Panhandle region, so that one of the Panhandle counties was chosen at random). If counties had been chosen in which little corn was grown, then the rainfall figures (averaged over the twenty-one counties) would not be even roughly the same kind of measures as the yield figures.

Unless a considerable acreage of each county was in corn, rainfall-per-county would decidedly not approximate or represent a rainfall-per-acre measure. The figures offered by Roberts are as follows:⁶¹

<u>Rainfall seasons</u>	<u>Rainfall (Inches) falling from September 1st to March 1st. Averaged over 21 counties</u>	<u>Spring-summer Corn Yields (Bushels-per- acre), Averaged</u>
1912-1913	9.5	11.0
1913-1914	17.5	12.0
1914-1915	12.8	29.5
1915-1916	14.5	13.5
1916-1917	9.3	8.5
1917-1918	5.5	7.5
1918-1919	18.4	24.0
1919-1920	13.8	28.0
1920-1921	15.6	25.0

Roberts' research design could undoubtedly be decried as primitive. I, however, have not found any sophisticated designs that yield any more information. If there was some great defect in Roberts' statistical

procedure, then it would not have yielded, as Roberts himself pointed out, the intuitively meaningful result that, when rainfalls in fall and winter are extremely low, spring and summer results will be extremely low (as in conditions following the seasons of 1912-1913, 1916-1917, and 1917-1918). The other figures, nevertheless, show no strong relationship between fall and winter precipitation and spring and summer crop results.

Roberts suggested that extension of the rainfall figures to encompass late summer rainfall might add to their explanatory value. This is not credible. A good, very dry summer was the Oklahoma farmer's best defense against the chinch bug (Blissus leucopterus). If much more than an inch of rainfall fell in July and August, the chinch bugs could find enough green, succulent vegetation to permit them to breed a third generation.⁶² If a mild winter followed, the chinch bug could be a most terrible destroyer.

For instance, in 1920, it was estimated that the northeastern Oklahoma corn crop was cut down by at least a third in yield through chinch bug activities alone. Clarence Roberts noted that, in 1920, seasonal conditions provided the chinch bug with "everything necessary for his comfort and well-being." When the winter had been mild, summer rainfall was abundant, and the farming system diversified, "The chinch bug starts the year in the wheat, feeds on corn in the summer and finds fall feasting in the fields of Kafir and cane."⁶³

If one removes the analysis of rainfall distribution over time from a seasonal perspective to a more abstract one, and takes account of some fundamental soil conditions, then one can arrive at a more satisfactory

formulation than practical farm experts came up with in the early 1900s. A fairly recent model put forth by Stephen Trudgill amongst others, will be adopted here.⁶⁴

In soil-association areas of high infiltration and good drainage, little topographical relief, and not many discontinuities introduced into the soil-water system by rock outcrops, precipitation, in and of itself, will be a major limiting factor on vegetation development. What is essential, however, is that the rainfall enter the soil at such a rate and at such a volume, as to dissolve minerals necessary to plant growth, and leave the soil fast enough and in no greater volume than necessary so that solutes are removed. Thus, under systems of good drainage but poor infiltration rate, the optimum rainfall regime would actually be one of low intensity and low frequency, so that the climatologist would typify it as "semi-arid."

It would be pleasant, then, to be able to say simply that the soils of western Oklahoma were of good drainage and low infiltration, so that crops could be hurt by too much rainfall, easily, but could be harmed by droughts only of the most severe and extended nature. The data are difficult to analyze, however. For the more easterly areas of western Oklahoma, the "Red Plains" ("Red Bed Plains" or "Reddish Prairies"), the Guthrie Soil Erosion Experiment Station data for 1930-1935 suggests that the region might be typified as one of low infiltration rate and good drainage.⁶⁵ For some soil types, however, the infiltration rate is very variable with steepness of slope ("Vernon" soils).

Until the 1970s, county Soil Surveys⁶⁶ contained tables of "Engineering Properties of Soils," but not tables of "Engineering

Interpretations" which yield information (under the heading of "Soil features affecting" drainage, irrigation, and diversion) on drainage properties and infiltration properties of soils. Earlier surveys, in tables of "Engineering Properties," gave a sort of ordinal ranking of soils in terms of their "permeability," the degree of ease with which air and water move through the soil, but this does not serve the purpose of contrasting infiltration and drainage conditions.

The Custer County survey compiled in 1976, lists only two soil types ("Fluents," and the somewhat more common "Clairemont"), and these of no great areal extent, that do not have good drainage characteristics. Discontinuities in soil profiles, however, make some areas of Cordell, Cornick, and Gracemore soils poor in drainage. In Trudgill's scheme, such discontinuities primarily limit the effectiveness of rainfall which is distributed in a temporal pattern that can be described as both intense and frequent, though frequent rainfall of low intensity may still be effective in maintaining stable vegetation cover, depending on infiltration characteristics.⁶⁷

Deep sands, coarse sands, or well-aggregated silt loams are generally high in infiltration rate.⁶⁸ Many of the soils on which were concentrated the Cheyenne and Arapaho allotments in Custer County, feature relatively rapid infiltration rates: Dale; Pond Creek; and St. Paul. Allotments located in more upland areas are on the very common Woodward-Quinlan soils.⁶⁹ The infiltration rate of soils in that association is highly dependent on steepness of slope, or even on the root-depth of common vegetation.

The Canadian County survey compiled by the Soil Conservation

Service in 1975, indicates that soil associations east of the Blaine Escarpment are often dependent, for their drainage characteristics, on the presence or absence of profile discontinuities. Heavy clays as well as rock outcrops figure in this state of affairs. Most Cheyenne and Arapaho allotments were on generally well-drained associations:

Kingfisher; Shellabarger-Konowa; Dale-Canadian; and Port-Gracemore.⁷⁰

As was the case for Custer County, soil associations of greatest areal extent tended to be low in infiltration rate, or to be very dependent, for their infiltration rates, on steepness of slope or root-depth of common vegetation. Again, many concentrations of Cheyenne and Arapaho allotments east of the Blaine Escarpment, as in more western areas, were on soils of higher infiltration rate than is characteristic of the area as a whole.

On the whole, western Oklahoma probably should be characterized as an area where soils are low in infiltration rate, but fairly well drained. Thus, rainfall of great intensity or frequency will not benefit regimes of vegetation, and will probably do damage. If drought-resistant crops are relied upon by farmers, only the most severe and extended droughts will do great damage.

Such a generalization, however, cannot be applied to concentrations of Cheyenne and Arapaho allotments. Many lowland concentrations were on soil associations of moderate to high infiltration rates. Furthermore, east of the Blaine Escarpment, many Cheyenne and Arapaho allotments along Kingfisher Creek and the North Canadian River must have been affected by characteristics of the cottonwoods and willows that were and still are concentrated in these areas. These woody species are

phreatophytes ("well plants"). The U. S. Geological Survey once determined that as much as 40,000 acre feet of water are pumped by these plants, through transpiration, back into the atmosphere along the North Canadian River in Canadian County, every year. That amount of water roughly equaled yearly water consumption by Oklahoma City in the 1950s.⁷¹

Indian farmers, then, could have probably used more frequent rainfall than white farmers needed. What applies, however, in terms of frequency does not necessarily apply in terms of intensity. In the spring of 1911, the correspondent for Cantonment wrote as follows in the Cheyenne and Arapaho Carrier Pigeon:

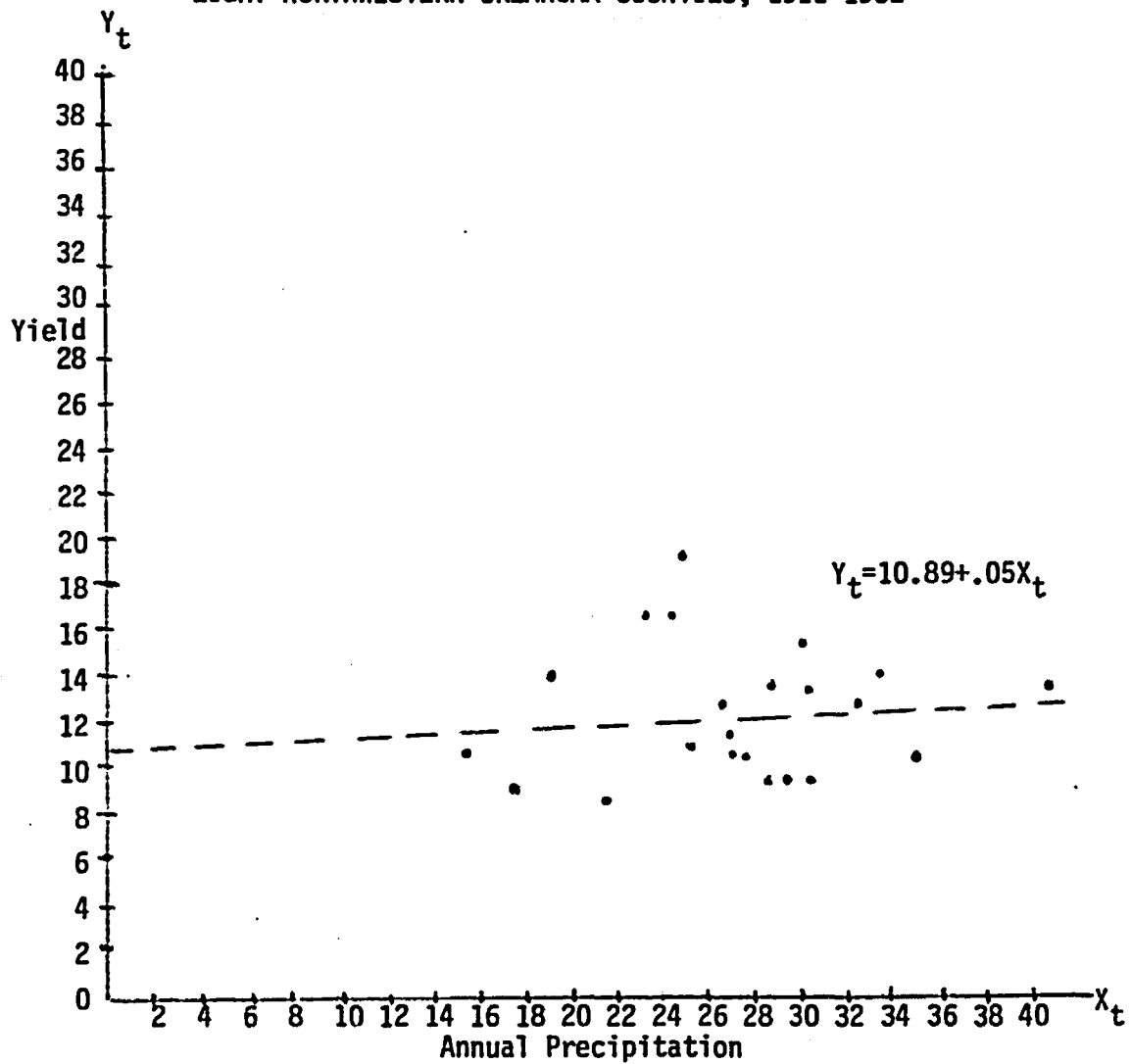
This part of Oklahoma had a very fine rain about the middle of February. As it came down slowly most of it soaked into the ground.⁷²

Soils of all types are affected in their infiltration rates, and in availability of soil moisture to plants, by their "humus" or overall organic matter content. By 1935, organic matter content of northwestern Oklahoma soils that had been cropped showed a loss on the average of 30.5 percent, when compared to virgin soils of the region. The southwestern region featured virgin soils of 2.51 percent organic matter content, compared to 2.72 percent for virgin soils in the northwest, and had lost only 17.9 percent of organic content, on the average, through cropping. Northwestern Oklahoma soils, then, had become increasingly intolerant of frequent and intense rainfall because of depletion of organic matter by poor rotations of crops, too much emphasis on cash crops.⁷³

Figure I, is a plot of annual precipitation averaged over eight

FIGURE I

RELATIONSHIP OF WHEAT YIELD(BUSHEL-PER-ACRE)
TO ANNUAL PRECIPITATION(INCHES), AVERAGED OVER
EIGHT NORTHWESTERN OKLAHOMA COUNTIES, 1911-1932



Data Source: Harder, "Wheat Production in Northwestern Oklahoma,"
pp. 86-87.

northwestern Oklahoma Counties, against winter wheat yields for the eight counties, with a fitted regression line. Most of the land area represented by these counties once constituted the Cherokee Outlet, bordering the Cheyenne and Arapaho Reservation on the north. Winter wheat dominated other cash crops in this region, certainly during the time period in question, 1911-1932, as the following figures from the 1925 Census of Agriculture indicate:⁷⁴

<u>Counties</u>	<u>Percent of Total Land Area in Farms, 1925</u>	<u>Percent of Farms Reporting Winter Wheat Harvested (1924)</u>
Alfalfa	90.3	79.8
Ellis	81.1	57.7
Garfield	91.9	86.2
Grant	91.0	88.3
Harper	83.7	76.7
Major	87.8	74.2
Woods	90.4	70.5
Woodward	84.2	64.4

When expressed mathematically as a function of variation in annual precipitation, very little of the variation in annual harvested wheat yield is "explained." The unstandardized regression coefficient of the linear function indicates that a change of .05 only, in yield units, is associated with a change of one unit in precipitation. It might be argued that the units of measurement are not satisfactory, intuitively, for comparison. Inches are not the same kind of thing as bushels. The unstandardized regression coefficient could be standardized through weighting it by the ratio of precipitation variance to yield variance. This can complicate matters, however, considering the use of aggregate figures.⁷⁵ In any case, the standardized regression coefficient amounts to no more than .10, in the yield-precipitation function.

Regression equations are generally written in the following form:

$$Y_t = 10.89 + .05X_t + e_t$$

The t subscript merely indicates the temporal character of the data. Precipitation (X_t) is the "independent variable;" yield (Y_t) is the "dependent variable." When X_t is equal to zero, yield should be at the level of the "Y-intercept," amounting to 10.89 bushels-per-acre. That may be intuitively offensive; it would be hard to imagine any wheat yield in a year of Zero inches of precipitation. The hard-kerneled wheats, however will continue to make growth over several months of zero precipitation, depending on soil conditions. Even in cases of the most severe drought, farmers have been able to get some yield by mowing the wheat for hay.⁷⁶

The most interesting parts of regression equations are the error terms, represented by e_t in the above equation. Residuals are constituted by the differences between actual values of the dependent variable, and those predictable from changes in the values of the independent variable. Regression analysis is designed solely to find a coefficient to multiply with values of the independent variable, so that the sum of squared residual values is minimized.⁷⁷ If the regression coefficient is unimpressive, then the error term must be treated with considerable respect. Something other than chance must be disturbing the relationship between the dependent and independent variables.

Residual "errors" may be intercorrelated, show "autocorrelation." The conventional test for autocorrelation utilizes the Durbin-Watson d .

statistic:⁷⁸

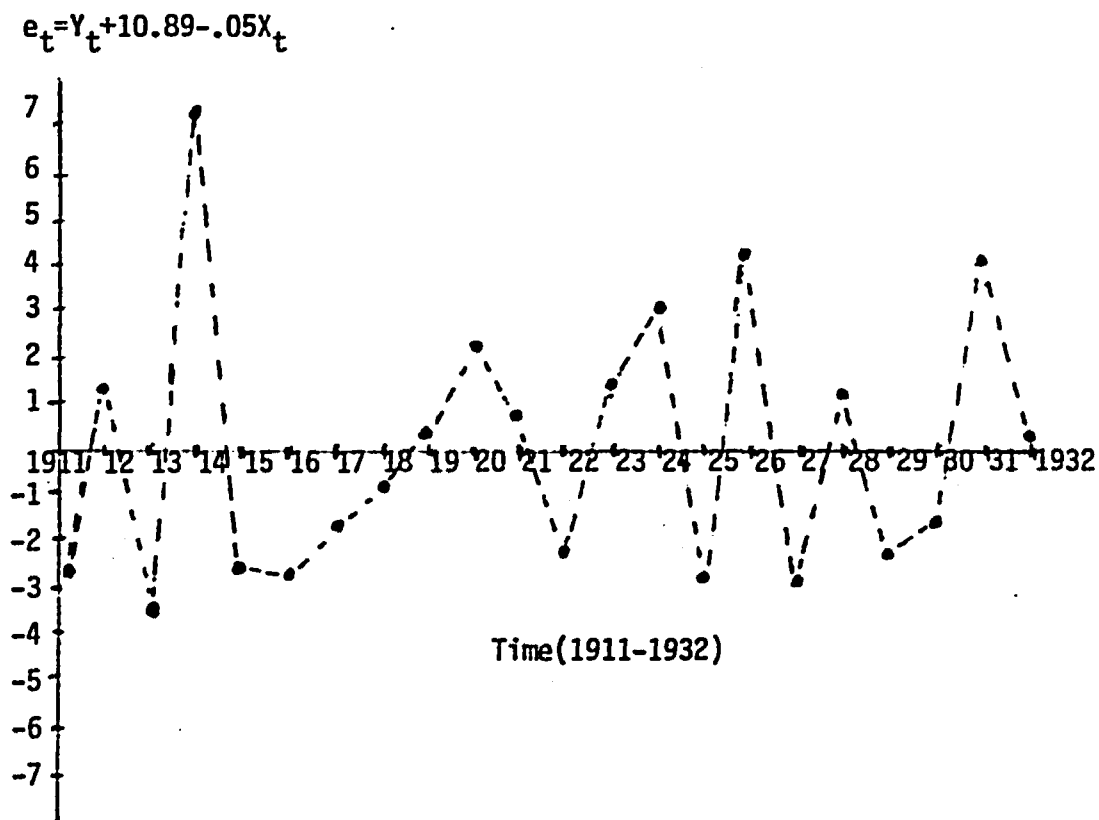
$$d = \frac{\sum_{t=2}^n (e_t - e_{t-1})^2}{2 \sum_{t=1}^n e_t^2}$$

The sum of squared differences between error terms in adjacent time periods is simply divided by the sum of squared residuals. The closer that $\underline{d}$ approximates a two-to-one ratio, the less likely there is to be significant autocorrelation. Durbin-Watson $\underline{d}$, computed for the residuals in the regression of yield upon precipitation, is equal to 2.87, representing significant negative autocorrelation ($4 - \underline{d}_L (=1.24)$ $d(=2.87)$)).

This result implies that a high yield in one year may lead to a low yield in the next year, and low yield may then lead to a higher yield. There is nothing intuitively objectional in such a formulation. Continuous cash-cropping in wheat on the same field from year-to-year reduces soil fertility, hence yield. Faced with a drop in yields, owner-operators may invest in fertilizers or other means of re-establishing soil fertility, if they can borrow money. Faced with a drop in yields, a tenant may try to move to another farm that has not yet been over-cropped.

By plotting the residuals over time, however, a different perspective may be gained (Figure II). Before 1915, and after 1920, the residuals do seem to fluctuate above and below the time line, from one year to the next. For a period in between, a tendency toward positive autocorrelation is manifest. The effect of changes in yearly yield seem to build into a trend toward higher yields, through a run of negative

FIGURE II
ESTIMATED RESIDUALS FROM REGRESSION
OF WHEAT YIELD UPON PRECIPITATION



(Data from Regression of Yield upon Precipitation, represented in Figure I.)

residuals, followed by a run of positive residuals.

This pattern would be expected if the years from 1914 to 1920, were particularly good in terms of wheat markets. A yield that otherwise might be considered poor would still be profitable. There would be money to invest, and less pressure to keep the fields constantly in cash crops. In fact, from 1914, when World War I began to shut Russian wheat exports off the world market, to 1920, when the post-war farm depression took hold, the conditions that I have mentioned in this paragraph were in operation.⁷⁹

The period from 1907 to 1914, was one of great mobility of rural families, as was the decade of the 1920s. In 1909, the percentage of farms receiving new owners or tenants in the United States ranged from four percent in Maine to thirty-three percent in Oklahoma. The highest percentage of all moves made, from 1907, through 1924, in Oklahoma, in order to start farming for the first time, was estimated to be about 29.4 percent in 1915. Turnover of operators through changes in tenants was much more frequent than turnover of operators through changes in owners. In 1924, half of Oklahoma's tenants changed farms.⁸⁰

The role of climate is fairly clear in the generation of mobility before World War I. The dry, mild winter of 1906-1907, was followed by a cold spring, which seemed to create excellent conditions for infestation of wheat, especially, by aphids ("greenbugs"). Much land began to be abandoned in 1907, or else changed operators. The severe drought of 1911 squelched a trend back toward stability and continuity of operations from year-to-year.⁸¹ Major climatic variations, thus, served as catalysts. Once a farmer went "on the road" as a tenant, it

generally took him several years to re-achieve ownership, or even to establish himself as a tenant on the same land from one year to the next.

Landlords were never, generally, in superb financial states themselves. They needed quick returns, and, therefore, considered the tenant a one-cash-crop work animal. The tenant thus realized no firm economic base on his rented land, and the land itself was abused.⁸²

During the war boom, things improved for many tenants as well as owners. A good tenant sometimes became the most valuable part of the property. Prices were good enough to allow the landlords to give tenants their head in such matters as diversification and conservation management of the land. Not all time and acreage had to be tied up in cash crops. The tenant could afford both rent and money for improvements. Thus, some tenants stayed on the same land from year-to-year even while legal title to the land turned over more than once. Other tenants invested in buying and improving lands of their own.⁸³ By the end of the war boom, many farmers who owned considerable acreages themselves found it profitable to expand their operations by renting additional acreage from other farmers.⁸⁴

Reliable figures for acreage abandoned within a year are available for the period following World War I. For the 8 northwestern Oklahoma counties represented in Figures I and II, wheat acreage abandoned from 1919, through 1932, is correlated with yield-per-acre at -58 percent. The correlation coefficient of yield with precipitation is also negative, but not significant, -.16.⁸⁵ Discontinuity of operations certainly had a considerable affect upon yield, or poor yields an affect

upon continuity of operations (probably a case of mutual causation).

Many landlords refused to help tenants with improvements after World War I, reverting to the system of requiring most acreage in cash crops.⁸⁶ Most tenants had learned the value of investment, but they had little else but the chattel mortgage instrument to fall back on in financing investments. That instrument served them no better than it served the Indians, as I described in Chapter II.⁸⁷

Year-to-year changes in tenancy led in the 1920s, to an increase in indiscriminant use of cut-and-burn agricultural techniques. Crop rotation systems could not be maintained from one year to the next. Feed prices rose sharply because tenants were rarely allowed acreage to grow their own feed.⁸⁸

By the end of 1929, "Save the Soil" groups began meeting. They were faced with a conservative estimate of two million acres of Oklahoma farm land having been permanently abandoned in the 1920s because of erosion. Lack of cooperation between landlords and tenants in year-to-year continuity of conservation measures, especially those involving terracing, was seen to be the worst feature of the farm situation.⁸⁹

Year-to-year discontinuities in land management because of poor landlord-tenant accommodations were not restricted to any one section of the state, or to any one type of farming. By the middle 1920s, the BIA-controlled lands of central Oklahoma were described in the farm journals as having been "cottoned" and "corned" to death by tenants who had been given no incentive to operate except on a "one-crop system."⁹⁰

BIA official policy was not very kind to tenants. Petitions by

tenants for delay in rental collections or extension of time for completing improvements contracted for in lieu of rent, on the basis of poor climatic or market conditions, did not find favor with the Indian Office.⁹¹ In actual practice, Cheyenne and Arapaho superintendents and agents were often lenient when the tenant was one whom the agents had known and dealt with over a long period of time.⁹²

Processing of leasing applications was often subject to delay. Sometimes this was on account of clerical errors and administrative inefficiency, or the fact that district farmers were often tied up by the business of actually helping Indians to farm, or because one of the heirs to an allotment wanted more money than the other heirs, and the lessee, had agreed to, or on account of the sheer volume of paperwork.⁹³

Stern action was attempted in 1911, by Concho Superintendent and Special Disbursing Agent William Freer in cases where the Indians were considered to be the cause of delay in leasing arrangements:

If an Indian allottee or the heirs to an Indian allotment are not sufficiently interested in leasing their land to secure an application within the five months allowed for the filing of applications, their lands should go unleased.⁹⁴

Freer accompanied this order with a requirement that district farmers should spend more time and do more paperwork in writing up detailed reports on leasing applications, thus replacing one source of delay with another.

Often, disbursing agents were uncertain about what was going on in terms of the status of many allotments. They sometimes expressed vague apprehensions that allotments were being occupied by non-Indians through "informal" agreements with the Indians. It often turned out that the

allotments in question had been completely idle for years, or had been put into production by the Indians themselves.⁹⁵

Tenants did not have any good choices in the face of delays. They could give up the land, even though they might not have any other land to work. They could apply for renewal and attempt to get by at other tasks, wait to see if the land stayed idle, and keep sending requests to the agencies. They could apply for renewal, stay on the land, hope for the best, and maybe end up charged with trespassing.⁹⁶

Perhaps the greatest area of BIA insensitivity to concrete economic circumstances concerned requirements that part of land rentals be paid in improvements (other than houses). Most non-Indian farmers in western Oklahoma, especially at the height of World War I prosperity, tied up a great deal of their financial resources in overinvesting in barns, fixtures, and the breaking out of large acreages. The result was that many farms were suffering commensurately.⁹⁷ What benchmark the BIA was using for the real capital value of improvements on supposititious farms under its management, is hard to determine.

Certainly, those western Oklahomans who made up the majority of tenants had few resources for financing improvements. This meant that many had to default on their lease contracts. Furthermore, the emphasis on improvements made a mockery of orders by agents that only "bona fide" farmers be allowed to lease Indian lands, not bankers or real estate men or the like.⁹⁸ "Bona fide" tenant farmers were not men of capital.

Of course, many businessmen fell into a sort of grey area. L. T. Brawner of Kansas was not a real estate man, a banker, or a retail

merchant. He was, however, a large-scale buyer of wheat for eastern mills, who leased extensively in the Seger authority area.⁹⁹ F. H. Wright was a large cattle rancher; he was also head of a mortgage loan company in El Reno. Wright was leasing seventeen allotments by 1913.¹⁰⁰

The role of BIA land auctions must be mentioned. Many tenants wanted to escape into ownership by acquiring Indian lands during the war years. Land speculators were generally lawyers and bankers, however, who were in a good position to frighten small-farmers away from bidding, by advising that all titles to Indian lands were always clouded. This kept bids low and put much of the auctioned Indian land into the hands of "land hogs." The speculators then resold the land to white tenants and small-scale owners at inflated prices. The would-be owner-operators were crushed by mortgages, and soon on the road again as tenants.¹⁰¹

Many farm leaders in Oklahoma were of the opinion that poor treatment of tenants excluded the tenants from community life, gave them no incentive to cooperate in community building. The need for cooperation amongst farmers, and the importance of strengthening rural communities in order to facilitate farmer cooperation, became an obsession with many farm leaders after World War I. As I pointed out in Section 5 of Chapter II, the BIA failed to recognize the necessity for cooperative movements until the late 1920s. Considering the failure of community building efforts by white farmers, under market pressures, in the 1920s, earlier efforts by the BIA to encourage cooperation would, perhaps, not have achieved much.

5. Community

In more eastern, tall-grass prairies of North America, cooperation, organized or informal, developed in the 1800s and early 1900s to an extent never approximated by Great Plains farmers. This can be seen nowhere more clearly than in the difference between Great Plains and eastern prairie institutions of harvest. Cooperation in the use of harvesting machinery was the rule in the eastern prairies, almost the exception in the short-grass and mixed-grass prairies of the west. Those farmers who have financed the purchase of cutting machines and threshing machines, or, as is common now, machinery combining these functions, have paid for them by selling their services to other farmers.¹⁰²

The Cheyennes and Arapahoes have been great harvest laborers in northwestern Oklahoma in the 20th century. By 1906, Calumet District Farmer Henry North (an Arapaho) was able to state that:

...a large number of my Indians were out last fall picking cotton, earning good wages, also topping broomcorn for the farmers around here, and they have learnt quick work in the harvest fields, shocking wheat to keep up with the binders. They have worked through harvest this year, and are now hiring out to the threshers...¹⁰³

By the time of peak activity for "custom threshing," in World War I, Indians preferred work as hands on threshing crews to most other forms of employment, certainly to "irregular employment" at Cantonment Agency.¹⁰⁴

I have no certain information on whether the Indians have often been hands with custom combining outfits. In the late 1920s, and in the 1930s, and to the present day, custom combine outfits have taken the

whole of the Great Plains as their service market area. Winter wheat is ready for cutting earliest in Texas, in May; in Saskatchewan, there is demand for cutting still in November. Combine crews have to be ready to travel far and wide throughout most of the year.¹⁰⁵ As long as the Indians could gather any benefits at all from their own farming, or from their trust accounts, it is questionable whether they were apt to move that far that often.

The fact that Great Plains farmers have not invested more individual or cooperative resources in harvest machinery is not hard to explain. The traditional cutting instrument of the eastern prairies was the binder, which tied the grain in bundles after the reel swept the standing plants across the sickle. Shockers could then gather the bundles into greater or lesser stacks, depending on how the farmer viewed the weather conditions. Under more humid conditions, too large a stack could damage the grain (the grain was said to "sweat in the stack").¹⁰⁶

The header was a simpler, through more bulky machine. It cut grain closer to the head, and conveyed it to a large table. This was good for farmers in more arid lands. The grain did not always make enough growth to be bundled, and the concentration of the grain in large stacks obviated the need to hire shockers, in a region of perpetual labor-shortage. The only trouble was that the region was usually very arid, but not always. Years inevitably came in which the grain spoiled in the large stacks.¹⁰⁷

Few small-farmers had the financial resources to buy either a header, binder, or combine involving either. Farmers' cooperatives

could often afford to finance either a binder or a header, but rarely both. If a header was chosen, then it was inevitable that years would arrive in which grain would be ruined in the stacks, or else the farmers would have to hire custom binding. The BIA and the Indians of Cantonment chose to go the other way and get a binder in 1911, for the Indians' kaffir corn. The fall was very dry, however, and several Indians had crops of kaffir corn that were too short for the binder, requiring rather the header.¹⁰⁸

Thus far, I have no more than expounded the theme, old by now in this chapter, that the Great Plains farmers made too good an adaptation to semi-arid lands, leaving themselves vulnerable to wet years. There were more complicated causes than climate for failures at cooperation and community-building. In the years preceding World War I, farm journals heralded the achievements, and stressed the values, of cooperation, but chose often to assume that admonition was all that was necessary, and that formal organization was not necessary to increase cooperation.¹⁰⁹ This odd philosophy, that human beings will come to an accomodation amongst themselves without the introduction into their affairs of power relations and formalities of organization, has been held by populists of both the right and the left throughout United States history. I would not be comfortable to put forth this ideology as a simple cause for retardation of community development, any more than I would be happy to rely upon a simple "materialist" explanation involving climate.

In any case, faith in the spirit of mutual aid certainly achieved little in western Oklahoma. During World War I, some formal

organization began. In October of 1917, for instance, a "community club" was formed in Blaine County. Stated purposes included vague references to general community development, but the club was essentially designed to promote experimentation and dissemination of knowledge concerning winter wheat strains best adapted to the local environment.¹¹⁰

In 1918, a strong drive for cooperative feed buying was encouraged by Agriculture Department county agents, in order to make "a real comeback on the profiteering feed dealer."¹¹¹ With the coming of post-war depression, cooperative marketing came to the fore. Farmers were urged to soften their ideals of "manly" economic independence in a world where labor unions set price floors for the sale of men's industrial labor, and industrial oligopolies tacitly colluded to keep industrial goods scarce and costly to farmers.¹¹²

By 1924, many farm leaders were beginning to use the word "independence" only in scare quotes, and almost like swear word. Farmers who resisted the discipline of cooperative marketing, and fell back on the cry of "liberty" were regarded as having made the words "independence" and "liberty" synonyms for their own gross selfishness.¹¹³

Urban businessmen and their organizations also had propaganda words and phrases to use against farmers' associations, as they had to use against labor unions. Taking the lead from Henry Ford, by 1924, businessmen began to attribute farmers' organized efforts to the work of Jewish plotters and agitators.¹¹⁴

By 1925, signed contracts to secure farmers' cooperative marketing agreements were being used. Informal cooperation, brotherly spirit,

could not be relied upon.¹¹⁵ More general ways of improving community solidarity, in the interests of securing cooperative agreements in farming, began to be sought in the 1920s.

The drive for consolidation of rural schools was motivated by considerations of cost-effectiveness in pre-war times.¹¹⁶ By the end of World War I, the consolidated schools were being promoted as natural "community centers."¹¹⁷ Avenues of farming cooperation, it was argued, intersected at community centers, and ramified through general community improvement activities.¹¹⁸

The drive for community solidarity and cooperation in farming foundered in the 1920s on the obstacle of the abruptly rising ratio of tenants to owners. Many landlords even tried to intimidate their tenants into voting against consolidation and improvement of rural schools. The landlords dreaded the increased tax burden.¹¹⁹

Toward the end of the 1920s, any possible way to integrate farm community interests was promoted, in desperation. There was even an abortive drive for consolidation of rural churches of different faiths into general community churches.¹²⁰ Local farmers were urged to invest in cooperatives and to control almost all the main economic enterprises of small towns.¹²¹

Tenants were urged to try to stick to one community, and build financial strength with "good will" collateral.¹²² Communities, in turn, were warned that the tenants' plight was a collective problem. The tenants' children were the continuity of the communities' development.¹²³ Landlords were scolded for failing to maintain the fertility of their lands, by not taking pains to help the tenant invest

in the land and remain upon it to maintain continuity in crop rotation systems. It was recognized, however, that, increasingly, landlords were of the "absentee" sort, and had no real interest in the development of rural communities.¹²⁴ It was recognized further, by the middle 1920s, that in northwestern Oklahoma landowners preferred to rent to other landowners with capital of their own, because the costs of depreciation on improvements rented to tenants was too great. Tenants rarely stayed on the same land for more than one or two years, and had little means and no incentive to offset the costs of depreciation themselves.¹²⁵

None of the moralizing did any great good. If everyone involved, whether landlord, tenant, banker, or merchant, possessed the best will in the world, it could hardly have made any difference. The United States farmer has been caught in productivity and output traps since the end of the Civil War.

Simply put, the productivity of the farmer's labor has accelerated much faster than his output. Farming has been rapidly mechanized, especially after World War I, and fewer person can be profitably employed on the land. Output, however, has grown faster than the value added by mechanization and other industrial inputs. Thus, the more productive farmer has been relatively impoverished.¹²⁶

In Oklahoma, in the late 1920s, many farm experts were heralding the tractor and other "power" machinery that reduced the need for manpower.¹²⁷ Some spoilsport farmers, however, noted that the use of the new "power" was accelerating the trend toward over-production that was depressing the market for cash crops.¹²⁸

It is a common fallacy to attribute the displacement of manpower

needs to the tractor. In the decade following World War I, horses rather than mechanical traction devices accounted for the decline of farm manpower requirements. More elaborate hitching equipment and technique allowed the efficient equalization of the load among lead and swing teams.¹²⁹ Large numbers of horses pulling abreast allowed the use of two-row implements by single plowmen. The two-row shovel cultivator became very popular in the late 1920s in western Oklahoma.¹³⁰

Good work stock did begin to become scarce in the 1920s. This was on account of the increased demand for more horses per implement, in conjunction with the aging of the workstock population. Horses and mules were living longer, and were kept in service longer, so that no general population decline set in before the 1930s. The increased demand for horse labor seems to have jeopardized the adequate breeding of new and better animals, however.¹³¹

The tractor began to really come into its own in the late 1920s with the development of improved power take-offs, which allowed the tractor to pull many different kinds of implements efficiently over the farming seasons.¹³² The adoption of the tractor did not mean abrupt end to the need for additional manpower by the small farmer. The tractor owner often had to keep a second man on the cultivator behind him, to keep the plow unchoked, and facilitate the turning of tillage implements at the end of rows.¹³³

If the western Oklahoma farmers had a choice in the 1920s, it was between investing more in the land and increasing yield per acre, or using the same amount of factors of production to farm more acres. The revenue was the same for a given number of bushels, however many acres

were required to grow that number of bushels. For the farmer to stay in business, he had to increase output. In fact, the tendency in western Oklahoma was to increase output by expanding acreage. Those who couldn't afford to buy or rent more acreage went out of business.¹³⁴ Absolute productivity of the land, in terms of yield-per-acre, was sacrificed as addition of capital raised in market terms the marginal productivity of farm labor relative to the marginal productivity of the land.

Farmers were well enough aware of the output trap. In the context of falling prices, the tendency of the independent farmer has been to increase output. The increase in output further depresses prices, which forces further output increases. Cooperative marketing was thought to be the answer in the 1920s.¹³⁵ The output trap was never sprung, however. By 1930, the farmers realized that the problem was world-wide, the farmers of many nations increasing output at a time of declining birth rates and depression prices.¹³⁶ Small, local cooperatives were no answer.

The fact that prices of industrial goods were rising while prices of agricultural goods were falling in the early 1920s, drew men away from the land to work in the cities. The farmer who could substitute machines for men survived.¹³⁷ The city man who could outbid the farmer for capital took over the land as absentee landlord.¹³⁸ Men who cared for the continuing fertility of small plots of land, and the continuity of rural community institutions, became few.

6. Chapter Conclusion

Most men attempting to farm in the early 1900s in western Oklahoma failed, regardless of their ethnic origins. This chapter has been offered as partial explanation of this phenomenon. It has been included in this dissertation so that I may be freed from the onus of having to explain how the majority of Cheyenne attempts to farm failed. The Indians had special problems, but these dwindled to relative insignificance beside the problems that faced every farmer of every ethnic group involved. If the majority of Southern Cheyenne farmers had succeeded in the early 1900s, it would have been something of a miracle, and I would not even have attempted this dissertation, because I would have felt intimidated by having to explain a miracle. In my next chapter, I shall attempt to deal with the concrete circumstances of Southern Cheyenne farming in the early 1900s, without any attempt to evaluate trends of failure. It is somewhat remarkable that any Indians had any success at all.

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CHAPTER VI

THE ALLOTMENT MATRIX

THE CHAIRMAN [Hon. Homer P. Snyder, New York]. What I am trying to get at is, if your statement is correct, that there are 40 men who spoke to you about this, that there are that number of farmers who cultivate the land. If that is so, that is the most remarkable situation I have discovered since I have had anything to do with Indian Affairs. This must be a farming community.

MR. [William W.] HASTINGS [Oklahoma]. Do you mean that the people farm it themselves or have it leased? MR. [Frank] HAMILTON [part-Cheyenne, Colony]. They farm themselves.

--"Hearings by a Subcommittee of the Committee on Indian Affairs, House of Representatives," 66th Congress, 2nd Session, 1920, Indians of the United States: Investigation of the Field Service, Vol. 3, pp. 571-572.

1. Chapter Preface

Discussion of the period from the time of Cheyenne and Arapaho allotment to the beginning of the Great Depression of the 1930s occupied most of Chapter II. That chapter, however, introduced the sub-agencies and farm districts only as administrative units. Chapter III explored the historical background of the distribution of Cheyenne settlements among the sub-agency areas. Chapter IV analyzed the development of the farm districts.

Moreover, in Chapter II, the context of Cheyenne farming in western Oklahoma was discussed almost exclusively in terms of land speculators and delinquent tenants. Chapter V was necessary to explain the factors

that tended to destroy small-scale farming in the region, whether the farmers were Indian or non-Indian.

In this chapter, I intend to emphasize that, among the Southern Cheyennes, a set of relatively small-scale, marginal farmers persisted in agriculture for many years, despite the destructive environment. In the rest of this chapter preface, I will discuss some conditions which explain, at least in great measure, the persistence of the Cheyenne farmers.

Necessary to small-farm survival were cultivation practices that utilized small acreages efficiently. Also necessary were steady sources of income to maintain farming activity on a day-to-day basis, sources not much affected by farm market cycles, and sources independent of bank and mortgage company credit arrangements. Finally, it was necessary to have enough manpower to farm in an intensive fashion, or, alternatively, enough horsepower to farm in a relatively extensive fashion, so as to maintain a level of production sufficient to justify market-entry.

Data bearing directly on the cultivation practices of the Southern Cheyennes and Arapahoes is meager. Examination of the Cheyenne and Arapaho "Farmers" File yields a great deal of detailed information on the work of district farmers in contracting leases, inspecting capital improvements, disbursing trust funds for subsistence and investment purposes, acting as truant officers, and mediating Indian domestic quarrels and controversies between Indians and non-Indians. Materials on Indian farming, from any perspective and in any aspect, do not constitute the greatest part of the "Farmers" file. Other files contain even less data on farming.

Inference, therefore, must be employed, Articles on field layout and cultivation practices in western Oklahoma in the early decades of the Twentieth century will, of course, be cited. Inferences from farm (allotment) and field layout can often serve in the place of direct data on cultivation practices. This will be explained in Section Two.

The analysis in Section Three, concerning the financial structure of the day-to-day operation of small farms will, fortunately, have to depend much less on inference. The general characteristics of this financial structure will be discussed in the following paragraphs, and Section Three will be an evaluation of the Southern Cheyenne situation.

Working capital for small and medium-sized farms in Oklahoma could rarely be obtained from banks. Men grew cash crops for seasonal sales in order to pay off mortgages or finance capital improvements. Families ate each day, and farm operation expenses were paid, weekly or monthly, from sales of garden truck, eggs and poultry, and dairy products. Almost always, the women had to specialize in obtaining working capital through such industries.¹ Women's work was especially important in periods of farm market depression, since production in which women tended to specialize was always in ready demand in local communities, without respect to how regional, national, and international grain, textile, and cattle markets fluctuated.²

Of course, the products in which women specialized could be, and were to some extent, readily consumed by farm family members, as well as readily turned over for cash at local markets. Emphasis, however, should not be put on this aspect. Images of "self-sufficient"

subsistence farmsteads were put forth as rationales for Indian allotment, and non-Indian homestead, policies, but ideology must not be allowed to distort fact.

Most farm families in Oklahoma, Indian and non-Indian, put food on the table largely by buying groceries in towns. This was always a subject for complaint by farm experts.³ In the logic of supply and demand, however, such practice often made sense in the short run. For instance, butter cost then (and still costs) more than margarine, so that farm families tended to sell butterfat for cash to local merchants, and then buy margarine from the merchants for their own tables.⁴

Dairy, poultry, and gardening activities were "women's work," though men often assisted in such industries, or handled them in their entirety. Even on specialized truck farms, however, some field crops had to be grown, if only feed crops for maintaining livestock. Therefore, division of labor between the sexes was of great economic utility.

When men handled truck crops as well as cash or feed crops in the field, they often had to share garden labor with male relatives or neighbors in order to save time to maintain their separate field crop operations.⁵ Similarly, when women farmed field crops without male assistance, as well as handling dairy and poultry and garden products, they often did so in cooperation with female relatives.⁶

In cases where men shared with their wives and female relatives the labor of dairy industry, or some other aspect of "women's work," the cash value of the women's labor was usually controlled by the women.⁷ Mostly, however, women's income was appropriated by men. "Mrs.

Agricola," writing in the Oklahoma Farmer-Stockman in 1920, cited some national and state statistics concerning the exploitation:

Twenty-four out of every 100 help with the field work and the same proportion feed the stock [the Oklahoma figure was 20 percent]. About one-third of farm women do the milking, 88 percent separate the milk and wash the separator and utensils, while only 11 percent have the funds from the sale of cream or butter. Eighty-one out of each 100 personally raised and tend the poultry, but only 22 have the poultry money, and 16 the egg money.

Women, therefore, were leaving the farm for the city, "where they will at least be custodians of their earnings."⁸

Of course, 1920, was a depression year. Women, however, had begun quitting the farm in large numbers in earlier, more generally prosperous times. In 1914, a special women's farm congress assembled to discuss the problem.⁹ The U. S. Department of Agriculture tried to address the issue by sending botanists (female, when possible) overseas to find varieties of plants for gardens that would be more profitable in the market. Female extension ("home demonstration") agents complemented the work of county agents.¹⁰

Nevertheless, World War I opened up relatively well-paid industrial jobs to women, and the cities suffered less than rural areas in the post-war depression. Moreover, the post-war hard times increased men's exploitation of their wives and children. The men were trying desperately to avoid bankruptcy. Frank A. Raymond, a southeastern Oklahoma farmer, wrote of the problem to the Oklahoma Farmer-Stockman:

Yet, you say many farmers are "making money." Yes, that is apparently true in some cases, so do we strike an oil well occasionally, but if you will get down to the bottom of things you will find that Bill Jones and Tom Brown made money this year largely at

the expense of the unpaid labor of their wives and children. Suppose it had been necessary for the farmer to pay the competitive wage price for all the free labor furnished by his family, the chances are good that he would have been in the red when his books were balanced for the year.¹¹

Into this sad context, I shall place the role of Southern Cheyenne women, in Section Three. As will be seen, the Indian women, for the most part, did not have to leave the farm in order to abandon farming.

Section Four will discuss the struggle, and for the most part, failure of Southern Cheyenne farmers to assemble enough manpower or horsepower to stay in the market. Issues already raised in Chapters IV and V concerning the importance of cooperation in the sharing of capital as well as labor, will again be recalled.

Before proceeding to the analyses, I must explain why I will not much rely upon the most commonly cited source of statistics in historical studies of reservation and post-allotment Indian farming and social change, the Reports of the Commissioner of Indian Affairs. Two of the most prominent target figures presented by these reports were number of "permanent houses" dwelt in, and amounts of acreage cultivated by Indians. These were intended to measure the degree of Indian acculturation.

The "Permanent" housing figures, however, do not generally convey the average state of physical deterioration of buildings at any given time, though the increase in appraised value was reported (in an area where houses were scarce, whatever their physical condition, and, therefore, inflated in price). As I discussed in Chapter IV most of the Indian houses constructed before "dead Indian" lands began to be sold

were thrown together by the Cheyennes and Arapahoes themselves. Many of these rapidly deteriorated.¹²

In later years, houses constructed by professionals or tenants under contract were often short-lived in their habitability.¹³ Dishonesty or incompetence among white contractors might account for part of this. In many instances, however, the part of the house in worst condition was the foundation. In the erosive environment of western Oklahoma, washing or blowing of soil often undermined house foundations as readily as stands of vegetation.¹⁴

The "permanency" of dwellings, in the Commissioner's Reports, was supposed to be indicative of stability of Indian residence. Actually, in the early decades of this century (and still today), small frame houses in rural Oklahoma were (and are) often moved from farm to farm. When the houses of Southern Cheyenne allottees were moved, very often these "permanent" structures wound up on no foundation at all.¹⁵

Often, the vagaries of BIA trust management policy resulted in the need to move "permanent" houses. As one allottee died, his "permanent" house could be moved to the allotment of an heir (at the heir's expense), and the "dead Indian" land sold.¹⁶ Occasionally, (Superintendents and Special Disbursing) Agents seemed uncertain which was a better investment, a "permanent" house that required trust money to move, or a tent house that the Indians could move themselves.¹⁷

Aggregate acreage figures were an even more misleading statistic. As a rule, Cheyennes and Arapahoes, like non-Indian farmers of their region, tended to break more ground than they planted. They then tended to plant more crops than they cultivated. Finally, they harvested less

acreage than they had cultivated.

Thus, an imperfectly scrupulous disbursing agent who wished to show that he had led the Indians to success in farming, could report acreage broken out. This was the device of agent G. D. Williams in 1888, as I explained in Chapter IV. Another agent who made himself look good by citing acreage broken was Captain (later Major) A. E. Woodson, in the late 1890s.

In 1895, Woodson began requesting, for issue to Indians, "rod breaking plows, which are of much lighter draught and better adapted to the Indian pony teams."¹⁸ In 1897, Woodson began "encouraging" (threatening ration cut-off to force) the breaking out of "more land during the summer months while their ponies are strong enough."¹⁹

This fashion of "making a crop on grass" was condemned by every farm expert in Oklahoma, since it slowed down plowing and threw off the timing of farm activities.²⁰ In 1903, Cantonment Disbursing Agent Byron E. White described the ill effects of trying to make a crop on grass, reporting of the Indian farmers that:

Their horses are small and of inferior quality, and ususally in the spring they are so poor and weak that they are unable to do but little, if any work, hence it is almost impossible for the Indians to prepare the ground and plant much of a crop, until the grass comes and fattens their ponies, by which time it is too late to plant.²¹

Ecologically, summer breaking was always ill-advised, as I explained in Chapter IV. On the heavier sod grounds of Red Moon District, the practice led to much erosion. The Red Moon District Farmer, in 1917, was an experienced man, Sydney L. Caulkins, while the Seger Disbursing Agent, Jesse Smith, was a new man out to make a

reputation for encouraging farm expansion by the Indians. Caulkins felt compelled to protest against orders to get most of the ground broken out in summers, saying that "there has been too much of the Indian land broken up already, some is so sandy that it blows badly, some is so ruff [sic] that it washes badly."²²

In any case, it is questionable whether extensive Indian breaking was justified in economic market terms in the 1880s and 1890s, at least. While agent Williams was paying the Indians to do a poor job of breaking out over 600 acres in 1888, he was admitting that the small market for Indian corn, which consisted only of agency and military contracts (and small sales to Darlington hotels) had already reached saturation.²³

Lack of a market was reported, in 1889, as one of the main factors in the first mass abandonment of fields in western Oklahoma: over 1000 acres were abandoned to the weeds by the Cheyenne and Arapaho farmers.²⁴

The general market situation of the 1890s, with its prolonged farm depression, also made extensive breaking in western Oklahoma hazardous. A non-Indian farmer, James K. Hastings, recollected that "It was rank folly for us to break out considerable tracts of land to sow to wheat as some of us did, and have to sell that wheat for thirty-five cents a bushel. We were really slaves of the Chicago wheat pit, as we had no storage space as yet."²⁵

Cheyenne and Arapaho Agent Charles F. Ashley, picking up the pieces in 1889, after the over-extensions that occurred under the Williams administration, noted that the Indians had not only been breaking out more land than they could plant, but also that they would plant about twice the acreage that they could adequately cultivate.²⁶ This problem

was never solved completely. For instance, in September of 1917, Cantonment District Farmer Jay L. Johnson reported that at least sixteen of the Cheyenne farmers under his supervision had planted in the spring, but had then failed adequately to cultivate the grain.²⁷

If the Indians had harvested all the acreage that they had cultivated, they would have been the most successful group of farmers in Oklahoma. Substantial acreage abandoned before harvest was reported for every year in Oklahoma for which adequate statistics were officially reported. (See the Section on "Precipitation" in Chapter V.)

Rather paradoxically, some Indians actually harvested grain for sale when they had done no breaking, no planting, and no cultivation. Russian wheat and African grain sorghums found the western Oklahoma climate salubrious, and "volunteered" growth on many abandoned acreages that had not yet been ruined by erosion. Thus, the Kingfisher Cheyenne Albert Red Nose was in a position in 1920, to sell or mortgage wheat that no one had sown.²⁸

There was nothing peculiarly Cheyenne or Indian about such patterns. White farmers tried to take advantage of volunteer growth when possible.²⁹ The massive harvests of "scrub wheat" in Oklahoma in 1920 frightened many farmers into a campaign for sowing "pure seed," lest the poor quality of their wheat alienate millers.³⁰

Non-Indian farmers also found occasion to plant when they had no intention of cultivating crops, gambling on the development of such a boom market that enough could be harvested even from weedy fields.³¹ Tenant farmers, especially, often broke ground when they had little hope of even planting, let alone harvesting. A particularly horrifying

description of this was given by the ecologist Charles Clinton Smith, who observed cultivation practices during the Great Depression of the 1930s, when Oklahoma tenant farmers were trapped on the land, finding no labor market in urban areas:

Much eroded land is occupied by tenants who continue their abortive agricultural efforts from year to year, regardless of results. Strips of ground between gullies are plowed up and down the hillsides. Sometimes some crop may be planted, more often energy or ambition is gone with the plowing and erosion proceeds to take the soil loosened by the plow. Succession must start all over on the plowed portions.³²

One of the most misleading aspects of statistics presented in the Reports of the Commissioner of Indian Affairs is that statistics gathered at the end of the fiscal year were not significantly related to crop harvests in the south-central Great Plains. Thus, harvest figures given in any year generally refer to the crops of the previous fall, whereas figures for acreage under cultivation generally refer to the spring crops of the current year. Hence, the most scrupulous superintendents and agents often submitted misleading annual statistical reports.³³

This matter was further complicated because Cheyenne and Arapaho, as well as non-Indian, farmers typically replanted acreage when a crop showed signs of failure (when they could afford the seed). For instance, Watonga area Indians, in May of 1896, sought to plow up their oats and replant to kaffir corn.³⁴ Since this took place on the "right side" of the fiscal year, the statistics reported for oats should not have been forwarded, or should have been revised.

When, however, cotton fields were replanted "as much as three

times," as occurred in the Red Moon Cheyenne District in 1924, then the reported figures for cotton acreage could not have been properly represented in the annual statistical report, since the final replantings took place after June.³⁵ Moreover, when the Red Moon Cheyennes replanted wheat acreage, ruined by hail in July of 1923, to "other crops," the fiscal year report for acreages in various categories of feed and cash crops must have been radically distorted in 1923.³⁶

Unscrupulous superintendents and agents could have played, and sometimes did play, with the aggregate figures in order to put themselves in the best light. A new agent could illustrate the hard task ahead of him by pointing out figures bearing mainly on bushels or tons harvested. An agent of long-standing could boast of his relative success by emphasizing figures reflecting mainly acreage broken out.

One element of agents' bias, however, to which there should be no objection, is found in the character of some special reports. For instance, the Indian Office, in 1922, addressed Seger Superintendent and Agent Fred B. Perkins on the subject of his seeming selectivity in interviewing farmers for his "Industrial Survey." It was pointed out to Perkins that "The total number of persons accounted for in your survey reports is less than 400, while the census for 1921 shows 761 Indians under your jurisdiction." Almost needless to say, the Perkins' surveys showed "the majority of the Indian families fairly equipped with stock and implements, and cultivating a reasonable amount of land."³⁷ Thus, the obvious inference was that Perkins was reporting successes and avoiding failures. What is really at issue, however, is whether the selectivity somehow disqualified the surveys from serving as evidence of

agricultural accomplishment by the Seger Agency Indians.

When I first began examining the Cheyenne and Arapaho Agency "Farmers" file, I was impressed by the amount of Indian activity in farming. Other files, especially that on "Indian Competency," tended to make the Cheyennes appear to be dismal failures. Fortunately, beginning in the World War I period, the district farmers began to take more systematic notice of the farming of lessees as well as Indians. The lessees commonly failed at the same, or greater, rates than the Indian farmers.³⁸ Aggregate statistics on leases hide this fact, since there were many more non-Indian than Indian replacements for failed farmers.

This led me to examine the context of Southern Cheyenne (and Arapaho) farmers in western Oklahoma, an examination that culminated in Chapter V. In even more general terms, it may be stated that there was little room in the farm market for small-scale farmers like the Southern Cheyennes. The chimera of "free" land in the west drew too many men of all ethnic groups into farming, from the end of the Civil War to well into the Twentieth century. Thus the fiercely competitive nature of the farm market resulted, the competition keeping prices too low for the long-run survival of marginal, small-scale farmers.³⁹

This brings me to a last caveat concerning reference to aggregate statistical reports, and also to the narrative overviews of agents and district farmers. Wrong inferences can be drawn unless the context of Indian farming is closely examined. For instance, I noted in Chapter IV that Major George Stouch, upon relieving Major A. E. Woodson as Cheyenne and Arapaho Agent in 1900, checked district farmers' current reports against Woodson's last set of aggregate figures, and found that Woodson

had vastly over-estimated acreage farmed. Stouch, however, found even less acreage reported in 1901, and again argued that the previous year's acreage had been over-estimated.⁴⁰

The real story of the 1900-1901 period was reconstructed by George Bishop of the Oklahoma Farmer-Stockman staff from his detailed notes on western Oklahoma farm development (Bishop himself farmed in Washita County):

Beginning with 1900, we had floods in July and plenty of rain all the year. All the branches were running when we went into the winter of that year. It was a good corn year and, of course, a good year for the kafirs.

Then came 1901. You know what happened. Floods in May; no more rain until late fall. Corn failed. Only early planted kafirs got by.⁴¹

The most marked difference between farm production in 1900 and 1901, in the reports of Cantonment and Watonga area district farmers, was that kaffir corn production had been considerable in 1900, but had failed completely in 1901.⁴²

2. The Layout of Fields and the Design of Cultivation

As I discussed in Chapter IV, the pattern developed by Cheyenne and Arapaho farmers in the late 1880s was one of cross-plowing against the plow grain that had resulted from contracted sod busting, using stirring plows rather than mouldboards commonly. The standard adaptation of Indian traditions of corn-field layout, to the iron and steel plow, was "crossplowing at right angles with seeds dropped at the crosspoints."⁴³ Such practices were common to both Indian and non-Indian plow farmers in the prairie and plains states in the Nineteenth century. Thus, most

field layouts were rectangular, many nearly perfectly square.

The unvarying grid of the United States Public Lands Survey (USPLS) system of rectangular land division upon the Public Domain determined that farms would have a regular, rectangular layout. In the Indian case, the result was that fields within farms, like the farms themselves, were rectangular. The BIA oversaw contracts for breaking of new ground, and enforced reserving, by each able-bodied adult male Indian, of 40 acres (quarter-quarter section) for direct operation by the Indian. In all land transactions, the Indian Office required that specifications be made "properly, by legal [USPLS, rectangular] subdivisions, or aliquot parts thereof."⁴⁴ "Metes and bounds" descriptions (total acreage and natural or artificial boundary specifications) were legal only after the land was alienated from the Public Domain. This condition helped to delay, until 1930, the development of a coherent policy of encouraging terracing and contour plowing of Indian allotments by the Cheyenne and Arapaho Agency.⁴⁵

Rectangular or otherwise, Southern Cheyenne farms initially consisted of a few acres. This meant that most of the plowing time was wasted by turning the plow at the ends of short rows. Captain Jesse Lee, when he was agent, began introducing double-shard plows, which, with shards set side-by-side or in tandem, facilitated turning. The Cheyennes continued to favor such techniques in the post-allotment period. Tony Wade, a white settler, recalled the cultivation practices of the Cheyennes in the year after allotment:

One time I came on one of them plowing. He had a pair of little Indian ponies that would weigh about five or six hundred pounds apiece, and had two plows,

one a fourteen inch and the other twelve inch. He had the twelve inch plow tied on behind the fourteen inch one and was trying to plow both of them. One of the ponies could not have pulled either one of the plows.⁴⁶

One practice of the Cheyenne farmers that puzzled Wade completely was their tendency to remove the whippetrees (crossbars to which horse's harness traces were attached) from their wagons.

What the Indians were trying to do was to make a more efficient use of their two-pony teams. This was a very primitive technique, but the BIA did not help the Indians to develop their power hitchings even to the extent of facilitating the making of double-whippetree plow harnesses. White Hawk, a Red Moon District allottee, asked the blacksmith at Cantonment farm station to provide him with such a harness in 1893, and was told to fashion it himself, using the whippetree from his wagon along with the single-harness whippetree that was already in White Hawk's possession.⁴⁷ Thus, White Hawk, and the other Indians who used double-harnessing, possessed a less effective wagon along with a less effective plow.

In the early 1890s, white farmers in the Cheyenne and Arapaho allotment area tended to use single-plows (usually sixteen-inch). By the turn of the century, they had adopted the double gang plow.⁴⁸ Thus, the wisdom of the Cheyenne farmer was vindicated, though nobody gave away medals. The type of double-plow that was to become the Cheyenne farmer's chief implement, the lister, was first used in 1905. Lister-drill combinations were being used in the Calumet and Darlington districts.⁴⁹

At Cantonment, in 1908, the Cheyennes were still struggling to

obtain three-horse teams so that they could utilize sulky (riding) plows effectively. Long Sioux, an old man who had been farming on the Dewey County side of Cantonment since the early 1880s, wanted six horses so that he could "farm lots of land." Seemingly, Long Sioux was aiming at a two-row effect. In this, he was about twenty years early, since the adoption of the two-row was not common before the late 1920s among non-Indian farmers (see Chapter V). Most of the younger Cheyennes, in contrast, would have been happy enough to get just a third horse, so that they could use him as a leader. Otherwise, they had to walk the plow, and use the strength of their own bodies to point the plow at the center of a furrow or ridge.⁵⁰

Use of the lister was a complicated matter. George A. Hoyo, "Expert Farmer" for Calumet and Kingfisher districts, reported critically on Indian progress in 1911:

I find that the Indians have good up to date corn listers, but get easily discouraged when they do not work smoothly. They are also poor hands at listing straight rows.⁵¹

One might try to look upon this optimistically. To the extent that the Indians were allowing the cultivator to drift along with the lay of the land, they were practicing an elementary kind of contour plowing. This representation, however, would be a travesty.

The resistance of Oklahoma farmers to contour plowing practices was sometimes represented as a result of the USPLS system and rectangular field layout.⁵² Actually, the rectangular layout was a consequence of plowing patterns. Trying to plow a row according to the lay of the land often forced the farmer to work his lead horses very hard. If the row

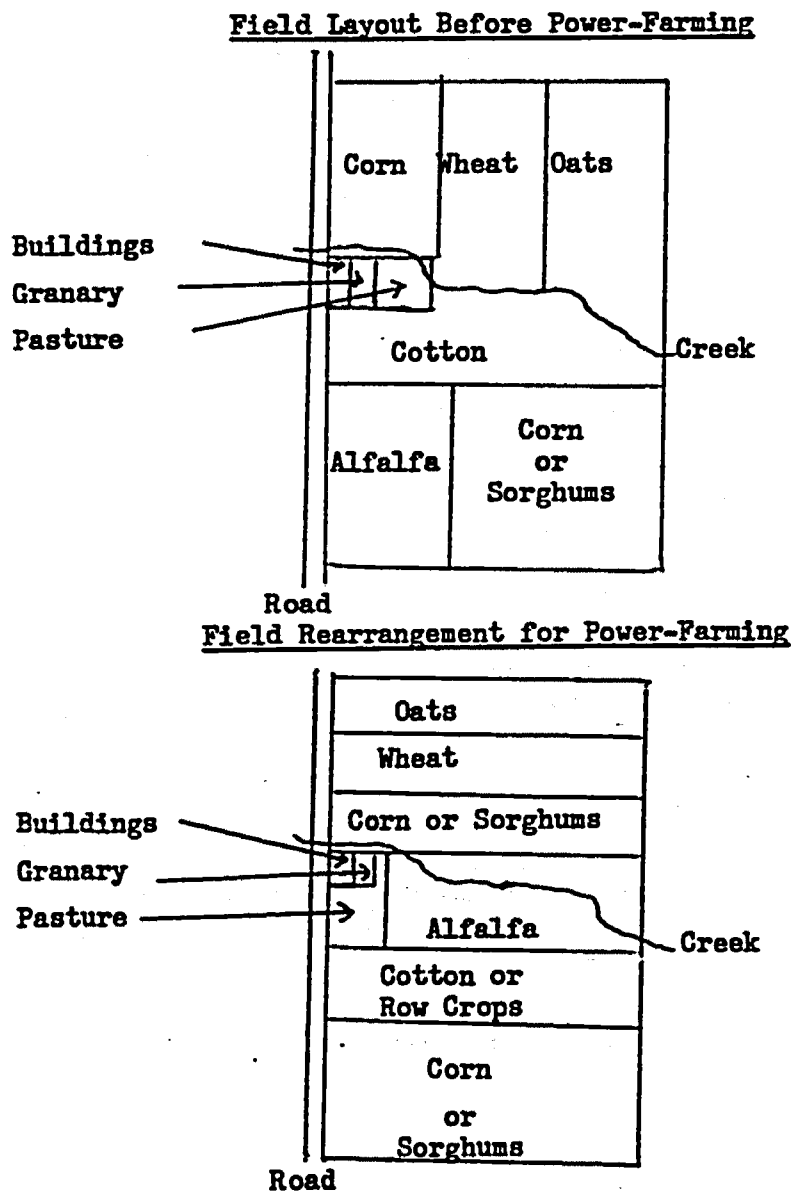
was to actually follow a contour, rather than merely be crooked and confound the furrows with the ridges, the "pointing" of cultivation became as difficult and time consuming as turning the plow at the end of many short rows.⁵³

The earliest tendencies of western Oklahoma farmers had been not only to lay out rectangular fields, but to make the fields as square as possible. The origin of this practice was in the plowing of the margins of farms, along property lines, in the Great Plains region. Farm experts often criticized this activity, since it turned the soil onto the fences, enriching places for weeds, and eventually resulting in unintentional ditching.⁵⁴

In its origins, however, margin plowing was a deliberate ditching practice. It served the early Great Plains settlers in place of the fencing that they could not yet afford.⁵⁵ In western Oklahoma, deep furrows along field and property boundaries were intended to act as firebreaks.⁵⁶ There was a need not only to keep fire out, but to keep it in, when cut-and burn agriculture was practiced. For instance, Kias Red Wolf, a Cheyenne of the Watonga area, paid considerable damages to a white neighbor in 1895, when his prairie-clearing practices burnt off thirty acres of his neighbor's land.⁵⁷

Power-farming, using a machine tractor or a relatively large gang of horses with special hitches, required narrower rectangular forms. Figure III shows the rearrangement of a non-Indian farmer's fields in 1916, according to the plan of H. L. Thomson. From approximately square patterns, fields had to be rearranged to shapes "long and narrow rather

FIGURE III
REARRANGEMENT OF A WESTERN OKLAHOMA FARM FOR EFFICIENT TRACTOR USE

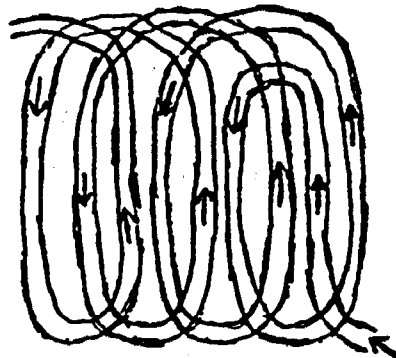


Source: H. L. Thomson, "Arranging Fields for the Tractor"

than square," hence better adapted to machine tractor use. Thomson noted further that alfalfa might be planted "in the irregular field made by the creek for the reason that it does not need to be plowed each year."⁵⁸

With narrower and longer fields, turning time is considerably reduced by the reduction in the number of turns required, if the field is plowed lengthwise and not cross-plowed. There is an assumption, however, implicit in Figure III, that field entrance and exit will be made by the road. In a square field, plowing was often begun in the middle of the field, and the general movement of machinery was often begun from farm buildings located in the approximate center of the entire farm. Plowing that moved from the center outward tended to prevent the plow from cultivating to full width at turns. Entrance and exit of a plow by the road in a square field tended to leave crescent-shaped parts of the field uncultivated at each turn, unless margin-plowing was practiced.

This analysis held good only for the common mouldboard plow. A lister threw the row out on both sides of the furrow, and thus required fewer turns to cover an entire field. This economized on horse energy and permitted machine tractor operation within a square field. The following diagram shows George Bishop's representation of efficient lister use in power-farming, assuming a square field and entrance and exit by the road:⁵⁹

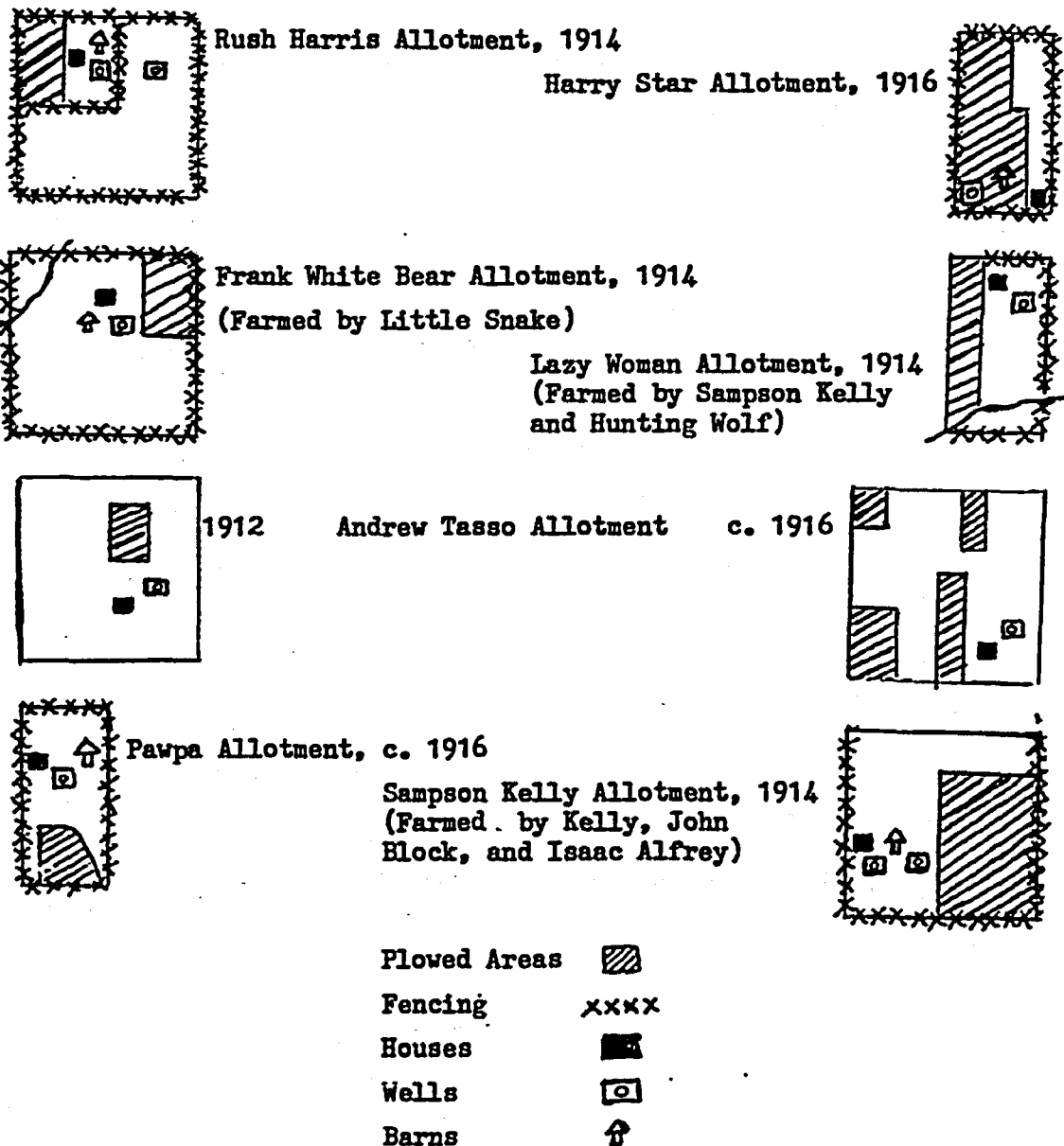


A relatively large field could be gone over completely and rapidly through use of such a pattern with the lister or with a two-row, drawn by a three-wheel tractor or three teams of horses or mules in good condition. If a disk or a tooth harrow was utilized in such a pattern, however, and its elements divided into sections and pulled in tandem by a six-animal gang, then the strain on the traction animals would be enormous, since the animals would have to pull in single-file at each turn.

In Figure IV, I represent the field shapes on the allotments of a set of Kingfisher Cheyenne farmers in the period 1912-1916. This set does not constitute a "sample" in any sense. In this time period the only nearly complete set of Industrial Status Reports available to me was for Kingfisher district. The allotments shown were not the only ones farmed by Kingfisher Cheyennes, but other allotments had acreage in lease as well as acreage farmed by Cheyennes, and the crude sketches of the District Farmers did not permit distinguishing Indian-operated from lessee-operated fields.

Rush Harris, located three miles from Kingfisher City markets, grew

FIGURE IV
KINGFISHER ALLOTMENTS CULTIVATED BY CHEYENNES,
WITH NO ACREAGE UNDER LEASE, 1912-1916



Source: CAA, File "Status Reports, Industrial," OHSAMD.

only feed crops, corn and kaffir corn, primarily to maintain his four horses. In the Industrial Status Reports, his land was described as "Rough up land, and hard clay loam soil." Harry Starr farmed five miles from Kingfisher on sandy loam soils. He kept poultry and swine, and cherry, pear, and apple trees, as well as grape vines. He raised garden truck and grew some alfalfa for feed. Nine horses represented the potential "power" of Harris's farming. His special implements were the double-shovel plow, the corn cultivator, and a one-horse shovel plow (a garden instrument).

Little Snake farmed on the land that his wife, Six, had inherited from Frank White Bear. Located eight miles from Kingfisher on sandy loam, Little Snake specialized in garden vegetables for market (only \$10 worth of the \$105 worth of produce was consumed by Little Snake's family). Little Snake had a field of corn for feed for his two horses and two mules. He used the lister and the cultivator (whether disk or shovel unspecified).

Much the same kind of activity took place on the sandy loam of Lazy Woman's allotment, which was located eight and one half miles from Kingfisher. Her husband Hunting Wolf, and her son-in-law, Sampson Kelly, grew vegetables and feed crops (kaffir corn as well as corn). These farmers had five horses and two mules; a lister and a cultivator were their special implements.

On his allotment located nine and one half miles from Kingfisher, on black jack sandy soil, Andrew Tasso grew a half-acre of vegetables and twelve acres of cotton for cash in 1912, and kept 300 chickens. Like Harry Starr at this time, Tasso worked the allotments of other

Kingfisher Cheyennes as well as his own, but, again like Starr, he eventually concentrated his farming on his own allotment. By 1914, Andrew had increased his garden to two acres, and grew alfalfa for feed. The number of chickens had been reduced to seventy-five, but turkeys had been added to the poultry operations, which suggests that use of poultry for eggs was giving way instead to dressed meat for sale. Tasso was a lister farmer. In 1912, he depended on four mules for traction, but by 1914, he had eliminated the mules and acquired eight horses.

Pawpa, on sandy loam ten miles from Kingfisher, was an old man with no implements of his own by 1916. He kept eight horses and two mules, however. He grew a few acres of feed crop, alfalfa, and little else. Sampson Kelly's allotment was the farthest from Kingfisher (12 miles), on sandy loam. His stepfather, Isaac Alfrey (a white man), and the husband of his sister, John Block, farmed the allotment, though Kelly ran the business end. This was the only allotment, in this set of examples, where the men were committed wheat farmers before World War I. Only four horses and two mules were kept, and the lister was relied upon. Some gardening was conducted and some poultry and swine were maintained. Feed crops were corn, kaffir corn, and cane sorghum. The disk was definitely utilized, as well as the lister.

This set of examples fits, roughly, the Von Thünen model that was discussed in Chapter I. Proximity to markets, and local ecological conditions, were major determinants of land utilization. Harry Starr, located relatively close to market, specialized in perishables. Sampson Kelly's men, located farthest from market, specialized in wheat. Rush Harris was closest to market, but soil conditions were less than ideal

for draining gardens and for fashioning scratch pens for poultry.

In terms of field layout, the "power-farming" concept can be used to some extent for explanatory purposes. Sampson Kelly's allotment, where there were, potentially, six traction animals (some were undoubtedly used for personal transport), had a field much less narrow than that of Harry Starr, who had, potentially, nine traction animals. Furthermore, where cultivated areas were most nearly square, on the farms of Rush Harris and Little Snake, the fewest traction animals were available. Andrew Tasso had a nearly square field in 1912, but his (non-contiguous) fields were much narrower by 1916, by which time Andrew had doubled his potential horsepower. Moreover, the most irregularly shaped field, Pawpa's, was associated with alfalfa raising, so that constant plowing was less necessary.

This mode of explanation is flawed because most of these farmers relied upon the lister or other double-plow instruments. Almost all did have mouldboard or stirring plows as well, but the evidence, what little exists, indicates that such instruments were not heavily relied upon. Probably the Cheyenne farmers had not developed a great deal of skill with the lister, so that efficient plowing in square fields was not yet possible, and the power-farming factor was still important.

The really accomplished cultivators among the Southern Cheyennes turned out to be the Red Moon Cheyennes who settled along Quartermaster Creek. The movement to settle along that creek did not begin until after 1910. Before that time, most Red Moon Cheyennes farmed close together on a few allotments located near Red Moon School, out of a need to be protected from violent white men. For instance, between eight and

ten Cheyennes farmed the allotment of a deceased daughter of White Shield for a long time. Their fields, necessarily, were narrow "strips." Weeds grew up between the individual farms, and eventually invaded the cultivated areas, to the extent that the allotment had to be abandoned by 1912.⁶⁰

By that time, however, the Quartermaster Creek Cheyennes had developed a new practice of cultivation. They disked the stubble land before listing to corn and kaffir corn.⁶¹ Farm experts like George Bishop described the benefits of such practices:

When the lister is run after a good job of disking, it is possible to leave both the bed and the furrow well mulched with loose dirt. Here is a condition which will both receive and retain moisture. The freezing and thawing of the winter months will have its expanding effect upon the undisturbed part of the soil between the lister furrows. When this bed is harrowed down and carefully opened up for planting, there is a condition of soil moisture which, it seems, would be the golden mean between the deep fall plowing and the shallow spring plowing.⁶²

Bishop's analysis was mainly concerned with early (summer) preparation for wheat. By 1924, Red Moon Cheyenne farmers had learned the value of early preparation. They began immediately after Arrow Renewal Ceremonies, at the first of August, getting the stubble ground ready for fall wheat.⁶³ Moreover, the Red Moon farmers had learned the value of breaking out new land in the late fall.⁶⁴

The development of the Red Moon Cheyennes contrasts strongly with that of the Indians (Arapahoes, predominantly) who farmed in Bridgeport/Geary District. These farmers worked both clay bottom and upland sandy soils, but usually had to abandon the clay bottom crops during droughts (see the section on "Precipitation" in Chapter V).⁶⁵

The Geary Indians tended to go over the ground only once with a lister, with few doing any follow-up cultivation.⁶⁶ Fall plowing was rare.⁶⁷ When stubble land became too dry, the Indians rarely attempted to sow wheat. On corn land, however, they seeded the ground without plowing.⁶⁸ The main preparation for gardening was to cut weeds and burn.⁶⁹

In the short run, such minimal tillage practices tended to increase the degree of compaction of the topsoil. These short-term effects impressed farm experts during the early development of Oklahoma agriculture, so that they agitated for deep-tillage.⁷⁰ In the long-run, however, the rate of compaction tended to moderate. Root systems, especially those of wheat, tend to be shallower with minimal tillage, but more extensive.⁷¹

Before World War I, the cultivation practices of the Cantonment Cheyennes rarely were orderly. The chattel mortgage traffic in trust-purchased machinery was discussed in Chapter II. In 1912, Cantonment Disbursing Agent Walter West reported that many Indians under his jurisdiction were scavenging for "old cast-away implements."⁷² Reliance upon such tools for cultivation made proper adjustment, especially of listers, virtually impossible. No field pattern, therefore, could have been properly developed. Listers with wings set improperly would have thrown rows out unevenly from the center of furrows on the first cultivation. Subsequent cultivations would then have buried too deeply some seed.

Listing, when implements were properly adjusted, could at least have kept an even throw of soil from the center of the furrow, burying

weeds on ridges, though leaving furrows bare.⁷³ Better practice required re-adjustment of the lister for follow-up cultivation, so that it wouldn't turn up the soil. The lister could then be run over ridges so that a little soil and stubble was thrown into the furrows for protection.⁷⁴ If the soil was left with a proper ridge and furrow development, the ridges hindered wind erosion on sandy land.⁷⁵

Another cause of slow development of adequate cultivation practices by Cantonment Cheyennes was the experimentalism of many agents and farmers before World War I. The worst program was the encouragement of adoption of "Campbell Culture System" practices (see Chapter II). Luckily, most Cheyenne farmers did not take to compacting the subsoil, pulverizing and constantly stirring the topsoil, and planting deep. Some elements of the Campbell system, however, seem to have been adopted in a haphazard fashion. Cantonment District Farmer Jay Johnson, in 1917, found some very odd practices of cultivation:

White Rabbit is breaking out some sod and he was planting high priced seed on it by putting it in the furrow and plowing it under [. T] hat was throwing seed away and I told him that if he would go to Cantonment after he got the ground plowed that I thought that he could get a disc and after he disced it he could get the grain drill to plant it on top of the ground there [,] but he must take the tools back as soon as he finished.

White Rabbit is trying hard to make his self independent of everybody else and make him self a living so if we can help him until he gets another crop he will be able to buy some more tools.⁷⁶

Johnson was extremely successful with the Cantonment Cheyennes over the following decade. He even bullied them into using manure, at least on gardens that were made on light, sandy soils.⁷⁷ The use of manure or commercial fertilizers was negligible among almost all ethnic groups in

Oklahoma prior to World War II.⁷⁸

3. Division of Labor and the Financial Structure of the Small Farm

"Kitchen" gardens were no easy matter in Oklahoma. A garden had to be laid out with line and stakes to position its rows for cultivation and drainage. One-shovel plows and harrows had to be employed for preparation, and hoeing had to be constant for success.⁷⁹ Gardening, then, was skilled labor, not easily learned.

The poultry business was easier to master. In western Oklahoma, domesticated hens laid eggs and hatched broods every month of the year, often roosting in trees in winter as well as in warmer seasons, if no chicken houses were provided. Local market demand for eggs and live poultry (as well as dressed) was constant even during the farm depressions.⁸⁰

The cottonwoods of the Kingfisher area constituted a preferred winter roosting place for wild poultry in the Nineteenth Century.⁸¹ Thus, the Kingfisher Cheyennes were in a good position to take the lead in poultry industry. They were very interested in good breeds of poultry even in the 1890s, and paid outrageous prices for a good Rhode Island rooster.⁸² By the early 1920s, almost every Kingfisher Cheyenne family had pure-bred strains of chickens for marketing, though most families had abandoned other lines of farm industry during the prolonged farm depression that followed World War I.⁸³

Another factor besides needed skills which might have retarded the development of Cheyenne women's contributions to the financial structure

of the small farm, was that women had maintained, during the years of nomadism in the early and middle 1800s a set of skills that could, and did, find returns from the marketplace. Beadwork, quill-work, hide tanning, and general seamstress labor, in the manufacture of clothing and ornaments and shelters, for ritual and for utilitarian purposes, were largely monopolized by Cheyenne females. Moreover, trade among the Indians themselves in items manufactured could bring remuneration in kind, and prestige, to skilled women.⁸⁴

The Cheyenne women safeguarded traditions of craftsmanship through the rituals and disciplines of societies that have usually been called "guilds" in the literature.⁸⁵ In a monograph published originally in 1907, the ethnologist James Mooney discussed the guild structure among Southern Cheyenne women in terms of several "trade unions," each with its own speciality of manufacture, each with its system of initiation fees and standards of advancement in rank. Mooney, however, considered the guilds to be "on the verge of extinction."⁸⁶ In the 1930s nevertheless, Alice Marriott discovered the "trade guilds" to be very well developed and profitable enterprises.⁸⁷

The cash values of the "beadwork" industry were discovered by Cheyenne and Arapaho women long before the time of allotment. When large wagon trains were organized by Indian freighters in the 1870s and 1880s, the freighters were often accompanied by their wives, who actually sat the wagons, while the men rode with whip in hand alongside the traction teams. The women sometimes took beadwork to sell to Kansas traders, and to travelers from the east.⁸⁸

Before and after allotment, an officer called a "Field Matron" was

expected, by the Indian Office, to develop the interest of Indian women in their role as farm wives. The first field matron assigned to Cheyenne and Arapaho Agency after allotment was Eliza Lamb in 1894. Between April and May of that year, Lamb "visited" 404 Indian families. The most women that Lamb instructed in any one subject were 159, in "Cleanliness of person and premises and disposition of refuse." The least number of women instructed in any one subject was fourteen, in "Care of domestic animals, poultry, and cows, and care of milk," while twenty-one were instructed in "Adorning home with pictures and shelves." Gardening was not mentioned.⁸⁹

John Seger became superintendent of Colony school at the time of allotment. He encouraged women's farming activity, but he clung to the idea that livestock was more important than cultivation. The girls at his school were encouraged to start a cattle herd, which numbered twenty-one by 1895.⁹⁰ Seger's greatest endeavors, however, to elevate the industrial (and political) status of Indian women had no direct connection with farming. In 1894, he insisted on three of the oldest girls in Seger school being allowed to attend an Indian council, much to the dismay of many Indian men assembled. The girls had been working in the sewing room of the school, and saving money to build their own homes and finance other improvements.⁹¹

In 1898, Dr. and Mrs. Walter C. Roe, Reformed (Dutch) Church missionaries, began the work of establishing the "Mohonk Lodge" at Colony. Their purpose was to encourage better home economics in general among the Indians, and also to help connect native craftsmen with eastern markets. The manager of the "Industrial Department" was Reese

Kincaide. He argued that the profitability of well-developed "cottage industry" would be the best incentive for "settling families on their individual allotments, with a view to making them ultimately self-supporting as farmers and stock raisers."⁹² By 1900, Seger boasted that the Mohonk Lodge was able to guarantee "any Indian woman who was any way proficient in making moccasins or other beadwork, work whereby she could earn \$1 per day, while I have been able to offer most of the time through the year work to the men whereby they could earn from \$1 per day and upward."⁹³

Other parts of the Cheyenne and Arapaho Agency were not so fortunate. For instance, in 1897, shortly before his death, White Horse mounted a campaign to renew the business of marketing Cantonment beadwork through Kansas markets. Agent A. E. Woodson, however, considered this "unauthorized leave," and sought to put a stop to it.⁹⁴ Such were the benefits of United States citizenship conferred upon the Southern Cheyennes through allotment.

The year 1898 marked the end, for a time, of gatherings of Red Moon Cheyenne women to practice beadwork. In that year, a group of cowboys decided that it would be amusing to shoot up the farm of Heap of Crows (son of Red Moon). They shot Heap of Crow's wife in the knee as she sat in her arbor with several other women, peacefully working at their craft.⁹⁵

Meanwhile, little progress was being made in gardening. Cantonment Cheyennes and Watonga-area allottees grew three major crops in 1900: corn; sorghum fodder; and melons.⁹⁶ The melons, however, should probably be counted as a field and not a garden crop. The Cheyennes had

begun farming on the reservation in 1876 by interplanting corn rows with melons (see Chapter IV). This was still a favored practice in Watonga District as late as 1910.⁹⁷

In 1900, the field matron for Bridgeport/Geary and Calumet Districts turned in a report stating that poultry, dairy, and gardening activities could not be maintained by the Indians under her supervision because they were constantly kept on the road traveling to secure ration issue, which required them to travel considerable distances every two weeks. Field Matron Lyons went on to state that "the Indian women are the least progressive. They cling to old customs more than the men."⁹⁸ After the cutoff of rations, in 1902, however, things began to change. Field Matron Lyons reported the beginning of considerable gardening in her districts, though she did not indicate whether women were specializing in the practice.⁹⁹

In the Colony area, a Cheyenne woman, Mary Littlebear, who was married to a Caddo Indian, James Inkanish, manufactured butter. Her husband, however, did the gardening and raised the chickens, as well as growing feed crops.¹⁰⁰ The most remunerative of women's industries, even so, under Seger Agency, was reported to be beadwork sold through Mohonk Lodge: earnings totalling about \$3000 in 1903 fiscal year.¹⁰¹

The first indication that an Indian woman regarded her contribution to farm work as an important investment in her marriage is found in the records for year 1908. In that year, a Bridgeport allottee argued that her husband, Short Man, was unfairly ordering her off his allotment and threatening her with divorce. This was unjust because "she have help him, even plants cedar around his yard and helps in split even cedar

posts and said plants garden spots, besides using her mules."¹⁰² This case concerned an Arapaho, not a Cheyenne, family.

The most involved or convoluted case in this time period, concerning a Cheyenne domestic quarrel, was a conflict between White Spoon and his daughter's husband, George Curtis. Curtis had contracted to build improvements on White Spoon's land, in return for rights to farm that allotment. When Curtis came to regard his female in-laws as useless personnel, he ordered them off the land. White Spoon then assisted his daughter in securing divorce proceedings, but counter-litigation ensued over the improvements. Curtis tried to sell the farm improvements (not the house), and succeeded in removing a windmill.¹⁻³

In the spring of 1909, no gardens of commercial size were reported from Kingfisher or Watonga Districts. Only two were reported from Calumet, and in both cases pairs of males (the Cheyennes Red Wolf and Doc Sewell, the Arapahoes Don Dyer and Bird Chief, Jr.) handled both the field crops (there were only feed crops grown) and the gardens. In Bridgeport/Geary District, White Spoon's domestic difficulties had reduced him to doing nothing but gardening. Three other men were also doing gardening only. Twenty-two farms contained gardens as well as feed crops, but only five of these gardens were rated "good."¹⁰⁴

Four of the five farms with "good" gardens were one-man farms. The only farmer with a "good" garden who was receiving assistance from another male was Short Man, who had lost the help of his wife through the domestic quarrel already discussed. Nine of the eighteen farms with gardens not rated "good" featured male cooperation. On seven of the

nine one-man farms with gardens not rated "good," the land was reported to be poorly cultivated or not cultivated after planting, and so was "weedy." Four cooperative ventures involving gardening were on lands reported to be well-cultivated, and two others were not weedy (one of these was later replanted).

Replanting seems to have been the order of the day. In the "cold, backward spring" of 1909, early gardens at Red Moon failed, but a number were replanted with success. These gardens were handled by the women alone, according to the field matron's reports. Beadwork was also practiced at Red Moon, where the field matron drummed up the business. Only \$35 cash was earned. This is significant, because of the brevity of the work and the small earnings.¹⁰⁵ If beadwork could not be in small items readily turned over for cash in local markets, then the cottage industries could not have been in direct competition with women's gardening and poultry operations, as a short-term income source resistant to farm depressions.

By the fall of 1909, almost every family in the Concho Agency district that had a frame-dwelling, rather than a tent, had also a vegetable garden.¹⁰⁶ The correlation of "permanent" housing with gardening seems also to have held at Cantonment. "About half" of the ninety-two houses constructed at Cantonment by 1909 (sixty-six constructed from heir sale money since 1902) were inhabited by allottees, and there were "perhaps fifty families" raising garden vegetables. No success, however, had been achieved at encouraging planting of decorative flowers. As one older Indian man told Cantonment Agent Byron White, "The Great Spirit gives the Indian all the flowers

that he knows how to appreciate. What we want is something to eat." ¹⁰⁷
 By 1910, White reported that about ten percent of the Cantonment allotments had Indian farms on them, while about twenty-five percent had Indian gardens. ¹⁰⁸

At least one Cheyenne female was fully committed to farming in 1910. A well-educated Cheyenne woman, Belle Balenti, in that year paid her husband, a white man, \$2200, a team of mares, and wagon and harness, in order to procure a divorce. The journalist Fred Barde was fascinated by what he considered to be a rather paradoxical situation:

Under her care, with the industry of her sons and her employees, her farm has yielded abundantly in crops, hogs and cattle, and she saved her earnings. Her husband belongs to the type of frontiersmen now rarely found in the west. He could not adapt himself to later days, and habits formed at the army canteen caused trouble in his home. ¹⁰⁹

Belle Balenti's empire-building, however, had little to do with the development of kitchen gardening by the average Cheyenne woman.

Female conceptions of the proper utilization of trust land did not always involve a commitment to farming. For instance, in 1909, John Van Horn was farming in cooperation with White Log, Reuben Taylor, and Rush Harris in Kingfisher District, until "owing to family affairs [he] moved to Cantonment." ¹¹⁰ John, however, was unable to convince his wife, Pipe Woman (Cantonment allottee), to reserve any part of her allotment, even the forty-acre section with improvements on it, so that he could stay in the farming business. Pipe Woman preferred the kind of contract that included the full quarter-section, with improvements, in the lease. Thus, John left Pipe Woman and moved to Calumet District to work for Joe Miguel, the husband of John's sister, in an effort to go into the

raising of a cotton cash crop as well as a feed crop.¹¹¹

The year 1910 was marked as the first year in which a Cheyenne woman, Emma Moore, was reported to be entirely self-supporting primarily on the basis of her beadwork enterprises. Emma applied for a patent in fee in order to sell her allotment at Kingfisher and move to Bridgeport District, either to get away from her improvident husband (a white man), or to be closer to Mohonk Lodge, which was then trying to reach Cheyenne and Arapaho women in districts closest to Colony.¹¹² In 1910, also, there was the first, and one of the very rare reports of a situation in which a woman's beadwork industry was explicitly portrayed as a deliberate attempt to provide working capital for her husband's farm work. This concerned the farm of the Calumet District allottee, Colonel Horn.¹¹³

By 1911, almost all the women of "Whirlwind Camp," a Southern Cheyenne village between Bridgeport and Watonga Districts, were reported to be engaged in beadwork for profit.¹¹⁴ The Field Matron for Bridgeport and Calumet Districts stated that beadwork had become the most important of women's industries, though some kept chickens and worked at gardening.¹¹⁵ At this time, male cooperation was explicitly mentioned as accounting for gardening on two Cheyenne farms in the Bridgeport/Geary area. On Young Bull's farm, Tyler Youngbull raised garden truck while Henry Blind assisted Young Bull with a field of kaffir corn. On William Guerrier's allotment on the border between Geary and Calumet Districts, William, Cecil Geary, and Two Lances lived in one house and farmed together in field and garden.¹¹⁶

In Kingfisher District, Inez Midnight Bull was raising geese and

chickens while her husband, John Bull, worked some fields. At least two men of the district, however, Clinton Pawpa and Fighting Bull, were handling the poultry themselves.¹¹⁷ The Cantonment annual report stated that no beadwork was done in 1911. Field Matron Agnes Williams, however, reported "beading" and "sewing," along with broom corn harvest labor, to be the "particular industries" that Cantonment women pursued.¹¹⁸

The winter of 1912-1913 was very conducive to gardening, and the women of Red Moon and Bridgeport districts responded. The Red Moon District field matron, however, found that "beadwork is their principle [sic] industry."¹¹⁹ Red Moon Agent Willis Dunn estimated that at least \$220 was earned by the Cheyenne women through Mohonk Lodge, but that about \$200 worth of beadwork was marketed locally.¹²⁰ The field matron in charge of Bridgeport District also reported success for early gardens in 1913, and also noted that beadwork had come to dominate among women's industries.¹²¹ A family quarrel was reported from Bridgeport District in which concern about control over a sewing machine dwarfed all other property considerations.¹²²

By 1914, Cantonment women were being drawn into the sphere of influence of Mohonk Lodge. The Agency annual report claimed that no information on women's earnings was available. The field matron, however, was reporting dollar figures.¹²³ Meanwhile, at Kingfisher, fancy quill-work and hide-tanning, as well as common beadwork, were projects for women's labor. The woman most committed to poultry raising was Glenna, the sister of Sampson Kelly. She and her husband, John Block, were farming on the allotment of Sampson Kelly, whose various

farm operations made him the most prosperous of Kingfisher Cheyennes in this period.¹²⁴

In the Red Moon jurisdiction, Field Matron Christina Kliever was reporting beadwork as the only female industry in 1914. She made a report in some detail on the beadwork enterprise. She said that "about 50 women" were involved in the industry, producing "several hundred pieces" for sale to eastern markets through Mohonk Lodge. "About the same amount" was sold through local markets, though the prices in the east were much higher. Each "piece" of beadwork took from one-half to three days to complete, and was valued from 25c to \$4. Some older women did fine sewing to order, working with materials provided by Mohonk Lodge, while younger women, it seemed, were oriented more toward local markets.¹²⁵

This disengagement of most Red Moon Cheyenne women from agriculture must have contributed to the failure of Red Moon farmers to take full advantage of the good cash crop prices of the World War I period. The drought of late 1917, however, was probably a greater factor, followed as it was by a brutal winter that set feed prices skyrocketing, so that work stock was weakened. One farm expert suggested that most farmers of far-western Oklahoma would do best to give up and work for farmers in the central part of the state, who were hurt less by harsh winter than by lack of manpower.¹²⁶

The Red Moon farmers, nevertheless, made a determined effort in 1918. On sixteen Cheyenne farms, considerable gardening was attempted. The district farmer noted that fourteen of these cases represented

cooperative efforts. Nine of these fourteen instances of cooperation involved men assisting other men. In only two cases were husband and wife explicitly reported to be sharing garden labor, though such cooperation can be inferred in two other cases. In one instance of male cooperation only gardening was being conducted, with no field crops in addition.¹²⁷

Meanwhile, Cheyenne men were having a hard time farming with their wives's families. The brother and mother of Clark Starr's wife decided in 1914 that Little Woman should divorce Starr, because he no longer owned any property. At the time, Clark was working on the farms of other Kingfisher Cheyennes.¹²⁸

Harry Flyingman got into trouble with his mother-in-law, Mrs. Nat Murphy, in 1915, by asking for the right to dispose personally of a share of the corn crop he had grown on his wife's family's farm. Mrs. Murphy's position was simply that her family owned the land, and therefore, had a right to complete control over everything on it.¹²⁹

At the height of the World War I farm economy boom, Reese Kincaide of Mohonk Lodge complained of the decreasing level of women's production of beadwork.¹³⁰ Seger Disbursing Agent Jesse Smith blamed the Indian propensity to lease rather than to engage in direct operations for deficiencies in both male and female production on the farm.¹³¹

Nonetheless, the Cheyennes and Arapahoes did more farming (in acreage terms) during World War I than ever before (or after). By the end of fiscal year 1919, 5180 acres were being cultivated by Seger Agency Indians, 4100 acres by Cantonment Agency Indians, and only 3040 acres by the Indians of the most populous agency, Concho.¹³² Yet it is

probable that women were leasing more land. Members of all ethnic groups in Oklahoma were eager to lease as much land as possible. Defaults on lease payments were never so rare in earlier and later periods. The post-war farm depression put a stop to the period of happy landlords.¹³³

In the depression of 1920-1924, Cheyennes and Arapahoes had to count on less certain revenues from land sales, as well as from leases. Many sales were made, but many defaults were made in payments.¹³⁴ Even when lease and land sale revenues came in regularly, the Indians still were suffering. The prices of goods not directly related to farm production were subject to inflation.¹³⁵

During the post-war depression the Watonga District Farmer reported that women did beadwork when trust funds were uncertain, and lived on trust funds when they were more certain. The women still sold a great deal of beadwork through Mohonk Lodge, but had found a great market among the oil-wealthy Osage Indians.¹³⁶ Moreover, it should not be assumed that the women tended to put their beadwork money into a common family fund. A controversy that took place in 1922, between Dora Flyingman (Cheyenne), and her Arapaho husband, John Youngbull, illustrates how both women's industries and women's earnings could be segregated from those of their husbands.

John forced Dora to ride a corn cultivator that had been set on sleds, when Dora was eight months pregnant. Dora vigorously protested. She recognized the marginality of her husband's farm operations on "a few acres." She argued that John made very little cash on the farm, and what little he earned he used to provide for his brother. It was Dora's

beadwork that paid for the day-to-day care of her children.

Thus, she demanded at least one wagon load of harvested corn as payment for her efforts. John agreed to this at first, but Dora demanded that this wagon load be sold at Anadarko, so that her mother could visit a relative, and Dora herself could see what the beadwork market was like at the Anadarko fair. Since John's farm was located near Geary, he balked at leaving his business to go so far out of his way to market one load of corn.¹³⁷

The only district farmer to see how fundamental the women's contribution could be to farming was Jay Johnson at Cantonment. In the midst of the post-war depression, he noted that "it is hard to get the men to go on and raise more crop as the women won't try to care for their part of the deal. A few of them now are trying to can a little fruit but they don't seem to know how to do it."¹³⁸ Johnson argued further that "in any land or nation where the wives, sisters, and mothers are in a subjection state the land has never provided near all it could."¹³⁹ Thus, Johnson made encouragement and instruction of Cheyenne women one of his main tasks.

This turned out to be a very slow process. The Cantonment Cheyenne men told Johnson that the Indian women just would not listen to anything that the men tried to tell them about farmstead work. Johnson's own experiences tended to confirm the men's assertions.¹⁴⁰ Moreover, Johnson came to see, as the depression wore on, that it was not merely poor motivation or ignorance on the part of the Cheyenne women that led to their disengagement from farming, but also the general climate of failure and discouragement.¹⁴¹

As the farm economy began to recover in 1924, some Cantonment Cheyenne women began to prepare extensive gardens.¹⁴² Johnson found a useful learning tool in informal demonstration. He layed out a small ideal garden, and casually drew attention to one or two details of it when a Cheyenne farmer or his wife dropped by to discuss any matter.¹⁴³ Moreover, by the winter of 1925-1926, the Cantonment Cheyenne women were moving strongly into the poultry and egg industry.¹⁴⁴ The venerable Mahsachtah, half-sibling of the long-dead Dog Soldier leader, White Horse, was emerging as the Cantonment version of Belle Balenti, taking an interest in every aspect of farm management.¹⁴⁵

The acreage of Cheyenne farms in gardens actually fell, at Cantonment, from 1922 to 1927, from ninety-seven acres to seventy-five acres. The number of poultry increased slightly from 2265 to 2632. Total acreage, however, increased from 1839 acres in 1922 to 5597 acres in 1927.¹⁴⁶ Thus, gardening and poultry-raising were not greatly increasing, but women were taking over these activities and allowing the men to expand field crops.

Almost all Cheyenne and Arapaho districts were marked by an increase in female farm participation in the late 1920s. The trend, however, did not emerge among Custer County Indian farmers until the spring of 1927.¹⁴⁷ In Geary District, though, many women were gardening successfully, and keeping chickens, in the spring of 1924. Belle Martin (formerly Belle Balenti) was the leader among Cheyenne women in pig-raising as well as chicken-raising.¹⁴⁸

The Great Depression of the 1930s reversed such trends. Belle Martin became wholly self-supporting through beadwork.¹⁴⁹ Among the

Cantonment Cheyennes, Louis Littleman was able to keep in the farming business for a while because of the success of his wife in creamery operations.¹⁵⁰ By the late 1930s, however, the main occupation of Cheyenne women at Cantonment was beadwork.¹⁵¹

James Ruggles, in his survey of sixty Cheyenne families in the Watonga area in 1930, found that every woman, without exception, denied doing any work in the fields, though one woman was observed chopping cotton on the family farm. Forty-seven of the sixty families had gardens, but in only ten cases were the gardens kept by women alone. Sixteen of the gardens were tended by men only, while the rest were handled cooperatively by men and women. Moreover, all the drudgery of the farmstead, like hauling water and chopping wood, was done by males. Even a "chief" was observed to be engaged in such activities. Ruggles ascribed these tendencies to the power females had gained through control of property.¹⁵²

The question of why Indian women responded to the farm economy upswing of the late 1920s, but not to earlier booms, may be answered partly by reference to demographic factors. We might take a hint from the case of Dora Youngbull, forced to do field labor while eight months pregnant.

The chief demographic shock to the Southern Cheyenne population after the time of allotment was in a sense, caused by the allotment itself. Agent A. E. Woodson reported, in 1893, that "Owing to the widely scattered condition of the Indians when settled on their allotments, it is impractical for one physician to visit them when necessity requires; and as a result many die for want of proper medical

attendance."¹⁵³

By the end of fiscal year 1893, 160 Cheyennes had died, while eighty births had taken place since the allotment. The age distribution of mortality is displayed in Table III. The death figures shown apply only to persons who lived long enough to acquire names and be enrolled on an annuity list. For instance, in the second quarter of 1893, Cantonment sub-agency reported thirteen deaths of infants who had never been enrolled by name. Ten of the deaths were cases of stillbirth.¹⁵⁴

Such a demographic shock may have long-term consequences. Table IV is intended to represent such effects.¹⁵⁵ Calculations of ratios indicating replacement potential of the population are given for several years. One of the ratio indices is the "Child-Woman" ratio of all persons aged 0-4, to women aged 20-44. An index of labor force replacement potential is presented as "Labor Force Structure," being the ratio of all persons aged 15-39 to all persons aged 40-64.

The justification for using these rough indices is no more, and no less, than the fact that they have served metropolitan planners in France very well for many years, in their projections for small population units. One can use the most elaborate simulations, or at least the standard vital rates, in examining small populations. In population units much smaller than 10,000, however, clerical errors that make no difference in population units for which there are thousands of persons in each five-year age cohort, become mortal sins. Furthermore, migration effects (in the Cheyenne case, intermarriage with whites) may confound the effects of factors operating directly on birth and death rates.¹⁵⁶

TABLE III

AGE DISTRIBUTION OF SOUTHERN CHEYENNE MORTALITY
IN THE YEAR FOLLOWING ALLOTMENT

<u>Age at the Time of Allotment</u>	<u>Number of Deaths by 30 June 1893</u>
0-4	79
5-9	11
10-14	15
15-19	6
20-24	8
25-29	5
30-34	6
35-39	2
40-44	4
45-49	6
50-54	0
55-59	6
60-64	2
65-69	1
70-74	1
75-79	2
80-84	0
85-89	1
90-94	1
95 and over	1
Total	157(Three persons could not be positively identified.)

Sources: "Record of Deaths, Cheyenne Indians since May 7, 1892," CAA, File "Deaths;" "Corrected Cheyenne Enrollment May 7, 1892," Section X, File "Cheyenne and Arapaho;" OHSAMD. Cheyenne and Arapaho Allotment Rolls, 1891-1892, Concho Agency. Record Group 75, File "Indian Census Rolls 1885-1940: Cheyenne and Arapaho Agency," National Archives, Washington, D. C.

TABLE IV
INDICES OF POPULATION REPLACEMENT POTENTIAL
FOR THE SOUTHERN CHEYENNES

<u>Annuity Census Year</u> (Fiscal Year Limits)	<u>Child-Woman Ratio</u> $\frac{P_{0-4}}{F_{20-44}}$	<u>Labor Force Structure</u> $\frac{P_{15-39}}{P_{40-64}}$
1891-1892	$\frac{282}{410} = .69$	$\frac{840}{411} = 2.04$
1893-1894	$\frac{239}{405} = .59$	$\frac{824}{430} = 1.92$
1901-1902	$\frac{210}{314} = .67$	$\frac{697}{479} = 1.45$
1908-1909	$\frac{196}{293} = .67$	$\frac{624}{499} = 1.25$
1917-1918	$\frac{232}{307} = .75$	$\frac{647}{480} = 1.35$

Sources: Cheyenne and Arapaho Allotment Rolls, 1891-1892, Concho Agency. CAA, File "Enrollment Lists and Census Rolls;" Section X, File "Cheyenne and Arapaho;" OHSAMD. Record Group 75, File "Indian Census Rolls;" "Register of Vital Statistics for Red Moon Agency, 1908-1917;" National Archives.

The figures presented in Table IV may permit some inference with respect to rates of fecundity and infant mortality. The 1893-1894 Child-Woman ratio registers, most obviously, the impact of the post-allotment demographic shock. As the years went by, the heavy losses of children in 1892-1893 meant that fewer females were entering the ages of fertility than there would have been without the demographic shock. By 1901-1902, however, the child-woman ratio figure had risen to approximate that of the pre-shock period. By 1917-1918, the child-woman ratio figure was much higher than the pre-shock figure, and the number of infants was almost as great as in the immediate post-shock period, though there were almost a hundred fewer women aged 20-44.

Infant mortality was high among most North American Indian groups before the "Save the Babies" campaign was initiated by the BIA in 1916.¹⁵⁷ One may guess, then, with reasonable confidence, that the child-woman ratios, among the Cheyenne women, rebounded because the women stayed pregnant through much of their fertile periods.

Farm work, in garden as well as in field, was hard physical effort. Pregnant women, like Dora Youngbull in the example given earlier in this section, would have been reasonably reluctant to engage in farm work, when lease money or beadwork might supply as much or more cash. As infant mortality decreased in the 1920s, however, it would have become less important for a woman to become pregnant almost every year in order to ensure having children survive infancy.

Before closing this section, it is well to return to the situation in the 1890s. The BIA always tried to blame high mortality rates on the Indians' persistence in aggregating in camp settlements. For instance,

John Seger, in 1895, reported to agent A. E. Woodson on the condition of Custer County Indians:

From the best I can ascertain the Indians drawing rations at the Arapahoe [township, Oklahoma Territory] station... have camped all winter right near the station where it was unnecessary for them to break camp to go for their rations. By which reason they have taken less exercise than usual, using their camps for longer periods without change or renovation. Coupled with this, whether coming from I am unable to say, there has been an unusual number of cases of pulmonary tuberculosis in that camp...In the lower Cheyenne camp where they have to come to this place for their rations, thus breaking up their lodges every little while, I can name no men, and only one woman, who has died with this disease during the winter, yet they are very similar in all other conditions and surroundings.¹⁵⁸

Thus, the BIA officials congratulated themselves on having enforced nomadism upon the Cheyennes through the ration issue system. The actual effects of the post-allotment ration issue system of 1892-1902, on both health and agricultural enterprise, was summarized by a field matron in 1900:

During the past year a number of deaths have occurred. Chiefly, among the children. And due to lack of proper care. Roaming from place to place. Every two weeks it is go for rations rain or shine, cold or hot. Sick or well.

I consider the issue of rations one of the greatest drawbacks in the field matron's work, it keeps them all [sic] ways...on the go. There is no such thing as them raising chickens and hogs so they might make their own living, when they are all the time roaming around. The rations are far from being fair pay for the trip.¹⁵⁹

Given such conditions, it would be astounding that any farm progress was made by the Cheyennes before 1902, were it not for the fact that some (Calumet District) lived very close to issue stations that did not vary according to the shifting of quarantine lines (Oklahoma Territory areal

restrictions on the distribution of Texas Cattle not dipped or checked for ticks). Moreover, some large Cheyenne farming communities, most prominently at Cantonment on the Dewey County side, boycotted the ration issue for many years in the 1890s.

4. Manpower and Horsepower:

A Settlement Pattern for the Bucket Shop

The farmer went forth to sow his wheat, but the law of supply and demand had nothing to do with the prices he received for his grain; the Oklahoma bucket shops, with the aid of the bulls and bears of Wall Street settled that...

—Kate Barnard (first Oklahoma State Director, Department of Charities and Corrections), "Human Ideals in State Government," The Survey Magazine 23 (October 1909-1910):16-20.

I learn that it has been the custom of many Indians to plant crops of corn or other products and sell them for almost anything they can get before harvesting them.

—Concho Agent William Freer, Circular to District Farmers, 25 March 1910, CAA, File "Farmers," OHSAMD.

Of 212 elevators and warehouses reporting in connection with the department's survey only 18 store for the public.

—Frank George (U.S.D.A.), "More Warehouses Are Needed in Oklahoma," 10 March 1922, Oklahoma Farmer-Stockman, p. 5.

Cheyenne and Arapaho superintendents and agents often found it convenient to explain Indian behavior in terms of "tradition" or "custom." Thus, Red Moon Disbursing Agent Willis Dunn attempted to explain the presence of a "camp" of Cheyennes on the allotment of White Shield, near Red Moon School and the town of Hammon, a railroad town, in

terms of the kinship relations among the men in camp. Hence, Lean (Lone) Elk was supposed to stay in the camp for much of the year because he was the son of White Shield's female sibling, Happy.¹⁶⁰

Actually, Lean Elk wanted to be close to the railroad, and to the Red Moon School Farm, which could afford to pick and choose its time and fashion of marketing to a degree unattainable by most individual Cheyenne farmers. Lean Elk's allotment was far away up river from the school and the town. His mother, Happy, however, after much dickering, was able to exchange her allotment for one on the Red Moon School Reservation, and Lean Elk then lived on and farmed that allotment.¹⁶¹

The most successful of Red Moon farmers were those who quit the Washita River camps first, and settled along Quartermaster Creek, beginning in 1911. One of these farmers, Rim Turtle, began his career by setting out several hundred fruit and shade trees on forty acres of his allotment.¹⁶² The Quartermaster farmers developed more extensive operations before the World War I period. In 1914, John Peake Hart grew fifteen acres of wheat as well as fifteen acres of corn and three acres of alfalfa for feed. He also grew thirty-five acres listed as "other crops," a category that usually meant grain sorghums and cotton (that Hart was growing cotton as early as 1910 can be discovered in the 15 November 1910 Cheyenne and Arapaho Carrier Pigeon).

Rim Turtle also grew wheat (fifteen acres), as well as twenty acres of corn and fifteen acres of "other crops," while growing twenty-five acres of corn and two acres of Alfalfa. Elliott Flying Coyote grew ten acres of wheat, four of corn, and twelve of "other crops."¹⁶³

All these Quartermaster Creek farmers tended to farm without

assistance in the pre-war period. Conditions were so hard in the spring of 1918, however, that they had to make cooperative arrangements. Magpie and his step-son, Clarence Orange, farmed the allotment of Magpie's wife, Walking Woman. Moreover, Magpie and Clarence had to share their farm machinery with Magpie's brother-in-law, Paul Beaver (Bald Head) and Paul's co-worker, Joseph Orange. Paul lived with Magpie, but farmed his own allotment. Meanwhile, John Peake Hart tried to go it alone on his own allotment, but did not have enough horsepower, and had no lister to economize on horsepower, so that he accomplished little.¹⁶⁴

During the post-war farm depression, Magpie arranged to have both Joseph and Frank Orange to help him, especially as he had to support his wife's parents. John Peake Hart had to enlist his son, Homer, to help him cultivate ninety acres, with John handling the garden. Rim Turtle farmed without assistance, but he grew only feed crops for his thirteen hogs (his hog fencing was excellent), poultry (100 chickens and six geese and two turkeys), and two milk cows. He was still in the fruit orchard business. Similarly, Elliott Coyote farmed unassisted, but was mainly a gardener and poultry farmer.¹⁶⁵

These farmers began more extensive production in cash crops during the farm recovery year of 1924 (see Section Two), but they resisted concentrating too much on wheat. They preferred cotton as a cash crop, along with corn and kaffir corn.¹⁶⁶ With such row crops, hoe cultivation could be reverted to, when worse came to worse, and manpower was sufficient.

The Kingfisher Cheyennes began their farm careers as rather

intensive farmers. Their district farmer, Jesse Witcher, was the only BIA farmer under Concho jurisdiction to protest the cut-off of rations in 1902. He listed, as self-supporting, Little Calf, Scott Whitt, Sampson Kelly, Andrew Tasso, Stump Horn, Dan Big Horse, Mexican Red Shin, Milton Strong, Cut Hair, White Log, and Hunting Wolf, on account of the fact that these men were actually farming. Witcher, however, pointed out that these were the men with the largest families to support, and that they began farming because rations alone would not feed their families.¹⁶⁷ This reads like an odd caricature of the Boserup Hypothesis discussed in Chapter I, as if population pressure led to agricultural development, but only on a family-by-family basis.

One difficulty with the Boserup Hypothesis, in any case, is its anthropocentrism. Farmers evolve in symbiosis with non-human populations of animals. In Section Two of this chapter, I noted two things primarily about the development of Kingfisher Cheyenne farming in the period 1912-1916. The first was that the Von Thünen theory of geographical distribution of relative intensivity of farming seemed to apply, but the other matter was the potential traction power of the different Indian farmers. The real population pressure on the land was workstock population.

In 1914, a group of Cheyennes and Arapahoes met in council with BIA representatives to voice complaints. The Cheyenne White Spoon was angry because he had prepared an extensive farm on inherited land, only to have it leased out from under him by the Concho agency officials. White Spoon gave other examples of Cheyenne farmers in similar situations. The Agency position, of course, was that, legally, the interests of all

heirs was best served by leasing the land, turning it into readily divisible cash.

Grant Left Hand, though part-Cheyenne, spoke for the Arapahoes, but elaborated, essentially, on the comments of White Spoon. Grant pointed to the cases of "Indians who want to come in close contact with their own brothers," saying "it looks very embarrassing to move out when the white man tells them he has the whole lease at his own price through the office." The Arapaho Bird Chief, Jr., added that hay land, of desperate importance to the Indians' workstock, was being overgrazed by lessees selected by Concho Agency.¹⁶⁸

Concho Agency personnel, over the years, regarded the Indian lands as overpopulated with workstock of dubious quality. J. E. Goss, Watonga District Farmer, in 1922, took a Malthusian view of Indian horses. The Indians grew enough feed for the stock, but they chose to sell it rather than to store it for their own animals, so there was not enough food for the horses, and only the strong horses should be allowed to survive.¹⁶⁹ Seemingly, only the Arapahoes tended to take Goss's advice.¹⁷⁰

Actually, the Cheyennes were only conforming to the market conditions of the early 1920s. Corn prices were declining at a less precipitous rate than horse prices. Thus, the Indians were merely refusing to overvalue their horses relative to feed prices.¹⁷¹ Goss's imputation that the Indians were holding onto the horses because horse ownership was a matter of prestige in Indian tradition reflected only Goss's ignorance of practical economics. Supply and demand constituted a brutal discipline, and the Indians did not have to learn how to "maximize" or how to be "economically rational" in order to conform to

markets.

Horses ceased to be a primary concern of the Kingfisher Cheyennes in the post-war depression period, and in the recovery period of the middle and late 1920s. Harry Starr and Andrew Tasso reverted largely to hoe agriculture on their farms, though they were growing cotton as well as corn. Each farmer had his sons out chopping cotton.¹⁷² This was a remarkable reversal. The Kingfisher Cheyennes had become extensive wheat farmers during World War I. The forcing of fee-patents on the Indians had been a dreadful blow, because it added taxes to their other burdens of debt, as the Competency Commission had recognized it would.¹⁷³ The effects of the forced patents also confused BIA farm accounting with respect to the Kingfisher allottees.

The Kingfisher District aggregate statistical report for 1918 shows a decline, from 1917, of Indian allotments from 128 to 105 1/2, and a decline of acreage cultivated from 2230 acres to 658. Fee patentees were explicitly excluded from the 1918 report (they were not excluded in the 1918 Calumet report).¹⁷⁴

Sampson Kelly of Kingfisher, whose patent was forced on him, decided to act in a truly acculturated fashion in 1918, and traffic in trust property. He bought a binder from Sampson Lane Bull for less than its market value. This made economic sense, since Kelly had sixty acres of wheat desperately in need of harvesting. Sampson Lane Bull had only twenty acres of wheat, which he had harvested for \$2.00 an acre under contract, and Kelly had paid him \$100 for the binder. In the logic of the Indian Office, however, the binder, bought with trust funds, was really government property, so that the district farmer felt compelled

to confiscate the binder without remunerating Kelly.¹⁷⁵

By 1920, the marketing system of the Kingfisher Cheyennes had degenerated into the chattel mortgage version of the bucket shop. Crop mortgages were more prevalent than horse and implement mortgages, which showed progress, in a sense. Sampson Kelly mortgaged no crops, but did have to mortgage a double work harness. Clinton Pawpa mortgaged fifty-six acres of wheat and a sewing machine. Other crop mortgages were by Sampson Lane Bull (thirty acres of wheat), John Tasso (sixty acres of wheat), Fighting Bull (fifty-five acres of wheat, twenty acres of oats), William Tallbird and Carrie Crow (twenty-seven acres of wheat), Bruton Stumphorn (forty-nine acres of wheat on his mother's land), and Andrew Tasso (five acres of cotton).¹⁷⁶

A sympathetic and competent district farmer, J. F. Haws, was assigned to Kingfisher District in 1919. Haws set out to fight the chattel mortgage merchants, but he fought too hard. He was transferred in January of 1922, because, he was told, "in your zeal to protect the Indians in your district you did things which are not sanctioned by the regulations of the service."¹⁷⁷

Other Cheyenne rural neighborhoods were not such disaster areas as was Kingfisher. Those farming in the Clinton area, however, were evolving into poultry farmers in the recovery year of 1925, as would be expected from the Von Thünen model. By 1925, eight of the Indians living closest to Clinton, one woman and seven men, raised poultry and nothing else. Two of these were among the twelve families who had chicken houses (not counting those used by lessees). Thirty-one farmers in all kept chickens. Out of these, Harry Rhodes (Goose) ranked eighth

in total number of chickens kept, and he was one of the Indians who had no other business except poultry.

Nevertheless, the only Clinton area farmers raising over a hundred chickens in 1925 did produce other farm products besides poultry and eggs. Oliver Roman Nose had 280 chickens, but also twenty-five acres of wheat and ten acres of cotton, as well as fifty acres of corn and ten of kaffir corn. Frank Reynolds, with 200 chickens, raised forty acres of wheat as well as twenty acres of corn and ten of kaffir corn. Peter Bird Chief had 106 chickens, twenty acres of wheat, ten of cotton, sixty in corn and fifteen in kaffir corn. McPherson Prairie Chief, however, with 140 chickens, seems to have been primarily raising feed for them. He had ten acres of kaffir corn only.¹⁷⁸

Proportionate to population, the Deer Creek and Thomas-area Indians (predominantly Cheyennes), located much farther from Clinton in Custer County, raised more wheat. The farmers nearer to Clinton had 205 out of 1208 acres in wheat in 1925, with 613 acres in corn and 273 acres in sorghums (seventy-five in cotton). In the Deer Creek area, in contrast, 140 acres were in wheat in 1925, with 117 acres in Corn and sixty-nine acres in sorghums. All of the twenty farm families seem to have raised some chickens, but the aggregate number was 267, while the thirty-one poultry producers nearer Clinton had 1499 chickens.¹⁷⁹ Clearly, Von Thünen factors were at work.

The real success story of the 1920s concerns the Cantonment Cheyennes. These farmers were strongly independent, when compared with farmers in other districts. In 1911, only one farm was being worked cooperatively.¹⁸⁰ In 1915, Ben Buffalo was ahead of most farmers in his

reliance on the two-row cultivator with his eight horses, substituting horsepower for manpower. Ben had to work at day labor to get working capital for his farm. Still, he managed twenty acres of wheat and forty acres of corn. He had a substantial garden, thirty-five chickens and five turkeys, a milk cow, and thirteen hogs.¹⁸¹

By 1917, the median age of the sixty-five Cantonment Cheyennes attempting farming was 44.5.¹⁸² Chief Mower, who was ill as well as being in his 60s, and even Frank White Wolf, who was in his 70s, not only attempted to farm but managed to produce some crops.¹⁸³ Reference to the "labor force structure" index in Table IV does not lead one to assume that demographic factors were strong in the aging of the actual participants in the labor force. The ratio of younger to older "workers" was declining in 1909, but was rebounding by 1918, and the computed figure never came close to falling below unity. In fact, the median age for Cantonment Cheyenne farmers in 1917 is in line with analyses by James Malin of Kansas farm populations from 1860 to 1925.¹⁸⁴ It seems that success in pioneer farming came through "on-the-job" training, through many failures and many new starts, more than through formal training in the artificial environments of school farms.

The Cantonment Cheyennes who weathered the post-war depression best were hog farmers: Ben Buffalo; Meat; George Hail; Medicine Cup; Maurice Medicine; Little Rock; Bob Finger; and Sam B. Deer. Ben Buffalo, in particular, balanced his hog production with over forty acres of wheat in 1923.¹⁸⁵ In this practice, the Cantonment Cheyennes were cleverer than many non-Indian farmers, who were dumping hogs in the years of bad prices, 1923-1924, that followed a period of over-production. The wheat

market and hog market cycles were relatively independent of each other, so that a balance of wheat and hogs each year was a profitable diversification.¹⁸⁶

As the farm market recovered in 1925 and 1926, the Cantonment Cheyennes, like their white neighbors, entered into cotton raising. The Indians used cotton as "legal tender" in the fall of 1925, turning it over at local stores for cash as soon as they harvested it, and buying what they wanted without having to make credit arrangements.¹⁸⁷

The majority of Cantonment Cheyennes did not, as did their white neighbors, alternate from year to year between wheat and cotton, trying to beat the market cycles. Instead, they tended to keep a balance between wheat and cotton acreage, as they had earlier balanced hogs and wheat.¹⁸⁸ Those Cantonment Cheyennes who did not keep such a balance in 1925, payed for it dearly in 1926. Wheat made good pasture in the winter of 1925-1926, and those who had not sown much of it had to try to make a crop on grass with teams weak from the winter.¹⁸⁹

As a result, the Cantonment Cheyennes went into wheat very heavily in 1926. Nonetheless, they continued to experiment with cotton. The shift to cash crops was strong, and the Indians began abandoning corn for sorghums as feed crops, concentrating on maintaining good quality horsepower for extensive cash-crop farming, rather than keeping corn for hogs.¹⁹⁰

Meanwhile, Jay Johnson had begun to run his district like a farm cooperative. In 1924, he managed to hold back the Cantonment Cheyennes from chattel-mortgaging their crops away. He held them back from market

until he had several towns competing for the Indian wheat.¹⁹¹ Moreover, he helped the Cheyennes to do a little warehousing for themselves in 1924: Andrew Mousetrail built a straw barn in the fall, and hauled the Indian feed crops and hay into storage.¹⁹²

Johnson bullied the Indians, especially Fred White Horse when Fred was running the district binder in 1926, into tinkering with their machinery until they could fix the implements themselves.¹⁹³ This tactic had become vitally important because Johnson wanted the Indians to share tools, but the Cheyennes who had mastered the maintenance of their machinery had taken to denying less competent Indians the loan of the implements.¹⁹⁴

Forms of cooperation, on-the-job training in mechanics, proper mixes of farm products, combined with the enlistment of females in the farm industry, as discussed in Section Three, made Cantonment District No. 1 the finest farming community that the Southern Cheyennes ever developed. The 5597 acres under cultivation in 1927 was over half the entire acreage under cultivation by both Cheyennes and Arapahoes in all districts of the recombined Cheyenne and Arapaho Agency.¹⁹⁵

5. Chapter Conclusion

The Cantonment Cheyennes had no access to the big markets at El Reno and Clinton. Okeene was not easily accessible to the Dewey County Cheyennes. Von Thunen's model, therefore, holds no promise of a ready explanation. True, the Cheyennes raised substantial cash crops that could stand transport over considerable distances, but the gardening and poultry activities of the women were an important factor in permitting

the men to go into cash-cropping.

Nor does the Boserup Hypothesis make everything clear. Cantonment was the least populous of the Cheyenne and Arapaho agencies. By 1922, 130 (25 percent) of the 513 Cheyennes enrolled under Cantonment were residing under other jurisdictions, while only 110 Indians, both Cheyennes and Arapahoes, enrolled under other jurisdictions were reported to be located under Cantonment in 1923.¹⁹⁶ According to Jay Johnson's annual reports for 1922 and 1927, even the workstock population fell from 414 in 1922 to 297 in 1927. The number of families farming decreased slightly from sixty-nine to sixty-five.

Another theory discussed in Chapter I, that associated with the work of Theodore Schultz in agricultural economics, is of greater explanatory utility. In Schultz's conception, it is the worth of human beings (the value of "human capital") that determines advancement in farming, as in other sectors of the economy, rather than the gross numbers of human beings in a community. Moreover, it is the level of demand for institutional adjustments, for cooperative marketing or for better road systems, rather than the number of miles to market, that is the strongest determinant of land utilization trends.¹⁹⁷

This fits the story of success at Cantonment very well. The development of skills with machinery among men, the female contribution to the financial structure of the small farm, and other features, represented an increase in the effective manpower on the farm, though the gross number of persons in the community was declining. Furthermore, the development of cooperation in marketing, and related institutional adjustments, decreased the importance of accessibility of physical

marketing facilities. If marketing is poorly timed, then the spatial distribution of industries and facilities is almost irrelevant. The greatest difficulty experienced by unorganized Oklahoma farmers of all ethnic groups was in resisting the lure of the bucket shop, holding out from market until the price was right.

One thing a truly scientific social scientist must find hard to do, is to conclude that human beings are important. If it helps to speak of "human capital" rather than human beings, then I am quite willing to adopt that terminology.

NOTES

- 1 Mrs. Mary C. Lee, "The Farmer's Wife," pp. 229-300; Mrs. N. M. Speidel, "Women as Farm Managers," p. 302; Second Biennial Report of the Oklahoma Territorial Board of Agriculture (1905-1906), Part VI.
- 2 Clarence Roberts, "Coming Out on Top by Staying Out of Debt," 10 November 1922, p. 5; Roberts, "Safe Farming in the Blackjacks," 10 March 1923, p. 18; "A Farmer's Wife" (Stephens County), "Are Farms Inefficient?--It All Depends," 25 March 1924, p. 4; "L. G." (Western Oklahoma), "Wants to Pay Off Mortgage" (with editor's reply), 10 December 1924, pp. 8, 25; "A Coal County Farmer," "Started at Bottom," 10 December 1924, p. 6; _____, "Meet the 12 Master Farmers of 1929" (especially the biographies of Theodore Stover and C. C. King), 1 January 1930, p. 3; Oklahoma Farmer-Stockman. See also, J. P. Grey, Weekly Field Reports for weeks ending 31 December 1921 and 7 October 1922, Johnston County Collection, File "Extension Work in Agriculture and Home Economics (U.S.D.A.)," OHSAMD.
- 3 See, for instance, Biennial Report of the Oklahoma State Board of Agriculture 1914-1915, pp. 16-17. This "State" report was actually a compilation by the journalist Fred Barde.
- 4 Clarence Roberts, "Talks with our Readers--Who Eats Oleo?" 15 February 1930, Oklahoma Farmer-Stockman, p. 8.
- 5 See, for instance, Ibid., Robert Rea, "sweet Potatoes as a Farm Side Line: A Profitable Winter Time Job for Two Kiowa County Farmers," 25 February 1924, p. 2.
- 6 Ibid., _____, "A Farm Without A Man," 10 November 1916, p. 15.
- 7 Ibid., "Farmerette" (Kingfisher County), "Partners in Fun and Work," 10 November 1920, p. 26.
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- 9 _____, "Keeping Girls on Farm is Problem," 16 October 1914, Daily Oklahoman.

- 10 Biennial Report of the Oklahoma State Board of Agriculture for
11 1914-1915, pp. 62-65.
- 12 Frank A. Raymond (Pittsburgh County), "The Farmer's Wage Problem,"
13 10 February 1920, Oklahoma Farmer-Stockman, pp. 38-39.
- 14 See, for instance, Cheyenne and Arapaho Agent (Major) George W. H.
15 Stouch to Cantonment District Farmer Ebenezer Kingsley, 1 July 1902,
16 CAA, File "Allotments," OHSAMD.
- 17 Cantonment District Farmer Jay L. Johnson to Cantonment Agent W. H.
18 Wisdom, 26 September 1916, CAA, File "Farmers," OHSAMD.
- 19 Ibid., Clinton District Farmer John H. Seger, Report for week ending
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- 21 Ibid., Cantonment District Farmer Clarence L. Cordry to Cantonment
22 Agent Byron White, 13 March 1911.
- 23 Cheyenne and Arapaho Agent George W. H. Stouch to Cantonment
24 District Farmer Ebenezer Kingsley, 21 April 1902, CAA, File "Indian
25 Houses," OHSAMD.
- 26 Concho Agent William B. Freer to District Farmer Benajah Miles, 24
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- Woodson to Commissioner of Indian Affairs, 6 February 1895, CAA,
File "Darlington Letterpress Books, Vol. 53," OHSAMD.
- Woodson to Agency Farmer F. L. Benson, 5 June 1897, CAA, File
"Darlington Letterpress Books, Vol. 69," OHSAMD.
- Clarence Roberts, "When Farm Labor is Worth Most," 15 May 1925,
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(Winter 1955-1956): 534.
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- 27 Johnson to Cantonment Agent Robert E. L. Daniel, 19 September 1917, CAA, File "Farmers," OHSAMD. See also, *ibid.*, Geary District Farmer B. F. Bennett, Farmer's Report for week ending 26 July 1924.
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- 30 _____, "Scrub Wheat is on Doomed List," 22 August 1920, Daily Oklahoman, Section B, p. 1.
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CHAPTER VII

CONCLUSION

Advice to persons about to write History:--Don't. Visit the Monte Purgatorio, as Austin called the Magnesian rock that yields Epsom Salts; or: Get rid of Hole and Corner Buffery.

In the Moral Sciences Prejudice is Dishonesty.

A Historian has to fight against temptations special to his mode of life, temptations from Country, Class, Church, College, Party, authority of talents, solicitation of friends.

The most respectable of these influences are the most dangerous.

--Lord Acton¹

1. Historical Recapitulation

The Southern Cheyennes, in the late 1700s, were among those Native Americans who farmed in river valleys of the upper Missouri River drainage system. In the early and middle 1800s, as a result of the incentives and compulsions of the Great Plains trade in horses, guns, and furs, the Southern Cheyennes became nomadic hunters and gatherers, for subsistence as well as trade. Part of their trading, however, was for agricultural products, and some horticultural practices were never completely abandoned by the group.

In 1867, many of the Southern Cheyenne leaders signed a treaty to establish a reservation in the region north of the Cimarron River. This area, however, was rejected for settlement. The streams were considered

to be too saline; much of the soil was subtly erosive drift soil. The Indians preferred lands along the North Canadian and Upper Washita Rivers. In 1869, the Southern Cheyennes and Arapahoes accepted an executive order reservation from the public domain in the region of their choosing.

Southern Cheyenne leaders like Stone Calf and Little Robe were tired of futile fighting and endless roving. They wanted to have houses and a sedentary life, and establish themselves as agriculturalists. The houses and farm tools and seed promised by federal officials and "friends of the Indians," however, were not forthcoming. The Indians, therefore, returned to a pattern of hunting and trading, ekeing out a living by returning, seasonally, to Darlington Agency for rations, annuity goods, and medical attention.

The Cheyennes were plagued by horse thieves, and provoked in many other ways. A few Southern Cheyenne leaders committed their followers to drastic courses of action that resulted in tragedy in the early 1870s. Some Southern Cheyenne groups had simply rejected reservation life completely until the mid-1870s, when they were brought in by force from the Texas areas of the Upper Washita. Some of the older women of this set of Cheyennes began gardening in the Darlington Agency vicinity in 1876.

Most of the farming begun in 1876, however, was the result of discipline exercised upon some young Southern Cheyenne warriors by Big Horse. Big Horse had led a group of Southern Cheyennes to the north to assist the older Turkey Legs in the wars of the Northern Cheyennes. Shortly after surrendering at Darlington Agency, Big Horse evaluated the

situation of few rations and restricted hunting, and then ordered his men to begin farming. To the surprise of BIA officials, Big Horse's group, many of whom had no other tools than tree branches or knives or bare hands, succeeded in raising some corn.

Big Horse then assisted the Cheyenne and Arapaho Agent, John Miles, in the organization of the Cheyenne and Arapaho Transportation Company. Indian freighters began hauling supplies from Kansas railroad towns to the Cheyenne and Arapaho Agency. In this fashion, they earned some cash, and were issued farming implements and seed. Eventually, some used Transportation Company business as a cover for smuggling timber into western Kansas. Cheyenne and Arapaho women began taking their beadwork along on freighting trips to sell in Kansas.

Some Southern Cheyenne leaders, most prominently Little Robe, and the younger Indians influenced by such leaders, went into any and every enterprise that could bring them currency in the late 1870s and early 1880s. Little Robe, at various times, farmed, hauled freight, raised horses for sale, cut timber to sell for fuel and fence posts, constructed fencing under contract to cattle corporations, delivered hay under contract to the U. S. Army and to white traders, and assisted John Seger in delivering the U. S. Mail. Among Little Robe's less obviously legal enterprises was charging a toll from cattlemen who drove their herds across the Cheyenne and Arapaho Reservation.

Agent Miles was interested, personally as well as in his role as agent, in the range cattle industry. He argued that farming was hopeless in the region, and gave little encouragement to the Indians who tried to farm in the early 1880s. By 1884, the only Indians issued seed

by the Cheyenne and Arapaho Agency were those who became sharecroppers on the Agency farm, which consisted of only 100 acres. An additional ninety acres, in total, were cultivated by several "bands" of Southern Cheyennes, who purchased their own seed from traders. Almost all these "bands" were considered to be hostile or non-progressive by the BIA, and almost all the leaders of these "bands" had settled on the Upper Washita or at Cantonment by the time of allotment, rather than in the Darlington Agency vicinity.

To the dismay of the Upper Washita and Cantonment Cheyennes, and to the anger of the U. S. Army, the Interior Department, in the early 1880s, authorized Miles and other agents to allow or encourage reservation Indians to conclude large-scale contracts with cattle corporations, leasing certain parts of the reservations. The Southern Cheyennes who signed such leases were almost all settlers in the Darlington vicinity.

Most prominent of the Southern Cheyenne leaders signing the contracts was Big Horse. He and a few other Southern Cheyenne leaders were genuinely interested in going into the cattle business themselves. Big Horse himself went on to become one of the very few Southern Cheyennes who maintained cattle herds of any considerable size before World War I.² Big Horse remained primarily a livestock farmer throughout his life, though in the post-war depression he and his wife, Wooly Dog, shifted over to the milk cow and pig-raising business.³

The Cheyennes of Cantonment, in the early 1880s, had difficulty ordering their lives. In the late 1870s and early 1880s, Stone Calf and Little Robe were fascinated by the agricultural and construction work of

the U. S. soldiers at Cantonment, and began to express some hope of accomplishing similar works, if only the BIA would help the Indians.⁴ The activities of non-Indian cattlemen, however, resulted in trampled fields of Indian corn. Moreover, many of the older Cheyennes at Cantonment maintained fond, and perhaps rather inaccurate memories of the good old days of buffalo hunting and glorious warfare.

One of the Cheyennes of Cantonment, the son of a very belligerent Indian Leader (Old White Horse), was "Young" White Horse, who became leader of the Dog Soldier Society after the death of his father in 1879. The Cheyenne "military" fraternities had ceremonial prerogatives and some duties as a sort of police force, by tradition. Young White Horse tried to use his leadership of the Dog Soldiers to keep the old men of the society from provoking the U. S. soldiers.⁵ As a result, the Army began to consider that it was White Horse's duty to maintain order among all the Indians at Cantonment. This White Horse had no authority to accomplish.⁶

In 1884-1885, D. B. Dyer succeeded Miles as agent. Dyer immediately grasped the limitations of the range cattle industry, the possibility of overgrazing in certain areas and the need for feed crops or wheat pasture to maintain the cattle in the winters. Dyer began struggling to supply the Indians with proper implements and seed. He contracted for professional sod-busting, and introduced winter wheat from Kansas.

Unfortunately, Dyer alienated the Cheyenne farmers of Cantonment and the Upper Washita, by trying to force them to relocate in the Darlington vicinity and leave other areas to the cattle corporations.

Those Indians who did remove to Darlington suffered greatly from malaria. Meanwhile, fortunately, populist groups, as well as the Army, pressured the U. S. Congress to make cattle corporations cease enclosing and restricting movement on the public domain. Thus, the U. S. Senate began investigations in 1883-1884 into Interior Department policies of leasing the public domain. The U. S. Treasury offered the opinion that a trend of oligopolistic control of western lands by cattle corporations would result from the Interior Department's cheap leasing policy.

In April 1884, the Commissioner of the General Land Office ruled that it was legal to destroy enclosures and take up stock as estray property on the public domain. The BIA, however, continued to describe such courses of action, when undertaken by Southern Cheyennes, as wanton terrorism. Finally, in 1885, President Grover Cleveland ordered the U. S. Army to clear illegal enclosures and remove stock from the public domain, to protect the integrity of Indian reservations, restore free movement, and allow settlers to file legitimate claims in areas open to homestead. Thus, under presidential orders, Captain Jesse Lee became acting Cheyenne and Arapaho Agent in 1885. Reservation Indians were encouraged to join the U. S. Army on six month "scout" enlistments, to help expel cattlemen from the reservation, and to protect the borders against horsethieves and would-be homesteaders.

Lee immediately began to negotiate with the Indians the development of a practicable agrarian settlement pattern. Farm districts were set up to assist the Indians in the agricultural colonization of reservation areas. Colonies were founded in areas of adequate water and timber, good grazing and arable lands. The other important factor in

determining the geographical distribution of farm districts was the location of fencing or capital improvements or wagon roads left by cattlemen on the reservation.

Captian Lee built upon the agricultural achievements of the Dyer administration. More acreage was broken by professional sodbusters. Stirring plows were issued to the Indians so that they could cross-plow the broken land, trying to tie ridges to promote soil conservation, and to form mounded areas at the intersection of lines of plowing, for corn-planting. Double-shard plows were introduced to facilitate turning at the ends of the short rows of the small farms of the Indians. The individual farms were necessarily very small, because of the scarcity of fencing materials. White Horse, however, was allowed to make a relatively large farm. Lee needed someone with authority at Cantonment, after the death of Stone Calf. Favoritism was shown to White Horse in outfitting him for farming, until he was persuaded to try to control the Cheyennes of Cantonment.

Lee's successor in 1887, G. D. Williams, was not interested in encouraging forms of cooperation among the Indians, as Lee had attempted. Moreover, he found it cheaper to pay the Indians to do their own breaking than to contract with professionals. He also encouraged the Indians to expand their operations beyond the limits of their small markets. Thus, when Charles Ashley became agent in 1889, he discovered that the Indian farmers had had to abandon considerable acreage broken out and planted in 1888.

The non-Indians who settled along the Cheyenne and Arapaho Agency borders in 1889-1890, when the first Oklahoma Territory lands were

thrown open to settlement, at first harvested little grain. The Cheyenne and Arapaho farmers sold them agricultural products, which the non-Indians purchased with federal disaster relief money.

The allotment of the Cheyennes and Araphahoes in severalty in 1891-1892, and the opening of "surplus" lands to non-Indian settlement, disrupted Indian farm development. The Indians were robbed of their competitive advantage in the newly created markets for farm crops, and preyed upon incessantly by horse thieves and timber thieves. Many Indians tried to disperse and go upon their individual allotments, but this made the problem of Agency health care delivery insuperable, and frequently Indians died for lack of treatment, especially the children. It also left them at the mercy of violent white men, so that the Cheyennes of the far-western parts of the reservation re-grouped into large camps for mutual protection.

The ration system was maintained for ten years after the allotment, and it enforced nomadism on most of the Indians. The quarantine lines of Oklahoma Territory, and those set by the U. S. Department of Agriculture were constantly shifting.⁷ Thus, many Indian groups had to travel far to stations that changed location according to the shifts in quarantine lines. This pattern damaged agricultural progress considerably, as did the general farm depression of the early 1890s.

Cooperation was not encouraged among the Indian farmers by the successors of Captain Lee. White Horse, however, enforced it among the Dewey County Cheyennes of Cantonment. His men attempted to go into wheat and barley farming in the fall of 1894, but Agent (Captain, later Major) A. E. Woodson refused them any help. Woodson argued that the

Dewey County Cheyennes were too far from the railhead to market wheat. Moreover, the barley experiment was represented as a cooperative effort on the Cantonment school farm, and was, therefore, entirely unacceptable.⁸

When the farm market began to revive in 1896, White Horse's farmers plowed land for other Cheyennes who wanted to plant crops. Those who were aiding others in plowing asked for extra rations, as provided by Captain Lee in similar situations. Agent Woodson, however, said that this would be against regulations.⁹

When White Horse died in 1898, his half-sibling Red Leg became leader of the Dog Soldiers, but Mower became "chief" of the district. Red Leg never allowed himself to be called "chief," and never accepted full responsibility over the Dewey County Cheyennes in the name of the Dog Soldiers.¹⁰ As Young White Horse had learned from his father's example the futility of violent resistance, so Red Leg had learned from his brother's example the futility of trying to maintain the disciplines of farm cooperation in the face of BIA resistance and interference. Thus ended the last direct link between aboriginal institutions and farm development.

The Cantonment Cheyennes went on to become the most independent farmers among the Southern Cheyennes. They shared implements and harvest labor, but they individualized their farming business. The kinds of extended-family farming found in other parts of the Cheyenne settlement area were rare among the Dewey County Cheyennes. The farmers of Quartermaster Creek under Red Moon Agency showed a similar trend in the years just prior to World War I, but the bad local climatological

conditions of 1917-1918 reversed the trend.

In the first decade of the twentieth century, Cheyenne farming was mostly restricted to gardening, poultry-raising, and feed-crop production. The Cheyenne women were slow to enter the family farming activities, which slowed men's extensive cash field-cropping. Gardening and poultry operations were of vital importance in supplying working capital for the farm on a day-to-day basis. When women did not undertake "women's work," the men devoted much of their time to such industries. As a result of the demographic shocks of the post-allotment period, eventually fewer women entered the ages of fertility. The high birth rate seems to have been the result of high fecundity rates, and pregnant women did not engage in the hard work of gardening, let alone assistance in the field. Moreover, the women had an alternative cash enterprise in the production of beadwork.

The Cheyenne men, therefore, enlisted male kinsmen in cooperative farming enterprises for the raising of feed crops, poultry, and garden truck. If wheat and cotton cash crops were to be raised also, then male cooperation was of even greater necessity. Unfortunately, the BIA favored land sales by men more than by women, so that control of land, at least on paper, began to accumulate in female hands. Thus a pattern of uxorilocal or matrilocal marital residence began to emerge, though the men often had great difficulty in dealing with their in-laws in farming.

Another peculiarity of BIA policy was the plan to keep trust accounts in an individualized manner which hindered the flow of capital even among related Indians. Thus, the Indians tended to raise money by

mortgaging their chattels, as did many non-Indians, especially tenant farmers. The prime mode of marketing by the Indians was also through a form of the chattel mortgage, the crop mortgage, at least when the bucket shops were outlawed. Non-Indian farmers who did not have the advantage of belonging to farm marketing cooperatives also sold most of their crops by way of the crop mortgage when the bucket shops were abolished (or went underground).

In their cultivation practices, the Cheyennes progressed slowly. They began to adopt the lister in 1905, but had difficulty in learning to adjust the implement for later cultivations. The influence of the U. S. Department of Agriculture was felt earliest and most strongly by the Red Moon Agency Cheyennes after 1910. The Quartermaster Creek farmers were precocious in their sophisticated use of the disk and the lister, their adoption of early cultivation or intensive fallow for wheat, and their recourse to fall breaking of sod.

In general, the lister permitted the growth of cash-cropping, since it economized on both horsepower and manpower, leaving the men time to keep gardens and poultry as well as work in the field. Many Cheyennes, however, especially those of Cantonment before World War I, had difficulty in retaining ownership of good implements, because of the chattel mortgage traffic in trust property.

Cheyenne farming increased in response to improved markets of the World War I period, though not to the extent desired by BIA officials. The BIA accounts of this period were confused by the effects of the Competency Commission determinations of 1917. Many of the best farmers could not hide their success and fee-patents were forced upon them.

Most district farmers did not enter the activities of fee-patent farmers in their reports.

Despite the new burdens of land taxation, and the importunings of land speculators, some of the best Cheyenne farmers retained their fee-patent allotments during the prosperous World War I period. The prolonged post-war depression, however, forced them to mortgage the land away. Thus, when the fee-patent farmers begin to show up again in the farm accounts after World War I, they are shown to have lost their own allotments and to be farming those of wives or relatives.

For instance, Mistamaha Wolf Chief had expanded his operations to 226 acres of wheat, cotton, kaffir corn and corn by the year 1917-1918.¹¹ His operations for 1918-1919 are not indicated in the Seger Agency report for fiscal year 1919, however.¹² He re-emerges in 1922, as an ambitious farmer on his own allotment, but his land was threatened by a mortgage that had been over-secured and which imposed usurious interest rates. Seger Agency personnel felt compelled to offer him legal assistance to maintain possession of his land.¹³

Mistamaha had much to lose in 1922. He was farming seventy-five acres of wheat, ten of cotton, and twenty-five acres of corn and kaffir corn. He had an extensive garden, 500 chickens, fifty-six hogs, and twelve cattle. He used two mowers, a hay rake and a hay baler, eight horses with two plows (he used an automobile for personal transport), and he even had his own grain binder. His capital improvements consisted of a good four-room house (with screened porches), a barn, a chicken house, a concrete storm cave, a well and windmill, a cistern, and a smoke house.

Mistamaha was an unusually accomplished farmer. Other Cheyennes, in other districts, however, had begun farming on a relatively large scale at the beginning of the World War I period, only to have fee-patents forced on them in 1917, so that their activities ceased to be of interest to the BIA until they lost their lands or were threatened by their loss during the post-war depression. These trends affected, especially, Ben Buffalo of Cantonment, DeForest Antelope of Watonga, and Sampson Kelly of Kingfisher. The Kingfisher Cheyennes, in general, were hit hardest of all the districts. The Quartermaster Creek farmers of the Red Moon District maintained considerable acreages, but they did have to handle the farms as joint family enterprises, or else engage in truck farming as a specialization.

The Cantonment Cheyennes were also severely hampered by the fee-patents and the post-war depression. The district farmer, however, Jay Johnson, was successful in reintroducing forms of cooperation, and in drawing females into the farm economy. There was also a considerable improvement in the level of mastery of the men over their farm machinery, especially the young men. The older farmers had learned mechanical competence informally, in the 1890s, under the tutelage of Magpie, who was "a kind of teacher for the Cheyennes in managing machinery." ¹⁴

The general farm economy recovery of the late 1920s found a relatively great number of Cheyenne women interested in helping with farm work, in all districts. The recovery gathered little momentum, however, before the onset of the Great Depression. From that setback, Cheyenne farming never recovered to any great extent. At the height of

World War II farm prosperity, only 5523 acres of "trust allotted" lands were reported to be Indian-operated in farming under the Cheyenne and Arapaho Agency jurisdiction.¹⁵ This figure, for all Cheyennes and Arapahoes in all districts, was less than the trust acreage cultivated by the Cantonment Cheyennes in 1927.

2. Relevance to Empirical Generalizations

"Success" in farming is a tricky concept to deal with, unless one wishes to enter the area of intuition and mere opinion. I explained, in the introduction to Chapter VI, how misleading the commonly reported cultivated acreage figure could be. The largest acreage for any Cheyenne and Arapaho community ever reported was for the Cantonment Cheyennes in May of 1927, and totaled 5597. The district farmer, Jay Johnson, however, estimated that twenty-eight percent of the wheat would be lost, on the average, because of green bug activity and the continuance of cold weather into May. Johnson estimated also that about ten percent of spring crops would be lost.¹⁶ It may be considered one of the strange quirks of the character of that rather strange man, that Johnson would estimate failure before it was obvious. He seems to have been a rather unusually honest and scrupulous district farmer.

Taking the figure of 5597 acres at face value, and dividing it by sixty-five, the number of families farming, one discovers that the average of acres cultivated by farm families among the Cantonment Cheyennes was 86.1. Russell Lynch, in his study of Czech Farmers in Oklahoma, found that the Czechs of Lincoln County, in 1938, cultivated, on the average, 73.6 acres of 160-acre farms (the balance of the

acres was in pasture land, woodlots, and acreage eroded beyond recovery). The largest average acreage under cultivation by other ethnic groups in Lincoln County was 53.8 acres.¹⁷ Lynch does not report any coefficients of variation, so that more precise statistical comparison is not possible. For the years chosen for comparison, however, I have considerable confidence in the validity of comparison. The parity ratio of current farm prices to ideal prices that would raise farm purchasing power to the level averaged in 1909-1914, stood at about ninety percent in both 1927 and 1938. The farm market recoveries in both these time periods had gathered little momentum, and, again in both cases, were to be short-lived.¹⁸

Leonard Carlson, in his study titled Indians, Bureaucrats, and Land, argues that Indian farming tended to decline after allotment, relative to increases in non-Indian farming. I have already pointed out that the units of comparison in Carlson's study are disparate. The majority of persons in all ethnic groups, who attempted farming in the early decades of this century, failed at farming. There were, simply, more non-Indian than Indian farmers to replace failures, so that Carlson confounds the facts of farm failure with the facts of demography. Moreover, Carlson ignores concrete market conditions. The Cheyennes and Arapahoes did not merely expand farm production at an increasing rate in the late 1880s; they responded to markets, and actually expanded beyond the dimensions of their markets in 1888. After allotment, there were some brief periods in which many Cheyenne farmers did extremely well, but these periods coincided with general improvement in farm market conditions.

The recovery of Cheyenne farming, especially at Cantonment, in the late 1920s, had, as a component, the increasing involvement of women in farming. This was of such great importance that I must mention another set of empirical generalizations that can be brought into question on the basis of the data presented in this dissertation. These generalizations reflect the common wisdom that women's contributions to agriculture declined, at least in relative importance, with the adoption of the "plow" or "permanent fields" or industrialization or market economic conditions (the position has been phrased in a variety of forms).¹⁹ Clearly, on a day-to-day basis, at least during the time period covered in this dissertation, women's work was much more important than men's work on the farm. The structure of female contribution had changed, not the level of importance.

3. Relevance of Theories of Agricultural Development

Ester Boserup has emphasized the importance of human population growth as a cause for agricultural growth. At some point, it is assumed, the marginal productivity of labor on farms falls to zero. After that, technological innovation takes place or no more population can be supported. The doctrine that, at some point, the addition of more laborers to the farm enterprise ceases to raise productivity significantly, has been disputed on empirical grounds. For instance, economists have pointed to the fact that reductions, through epidemics, in the farm labor force in areas of India depicted as "overpopulated," have resulted in significant declines in farm production.²⁰ One might presume that some theoretical limit to the number of persons who can be

supported by a given technology is conceivable. Attempts to construct indices of "carrying capacity," however, have not been very successful.²¹

In terms of the Southern Cheyenne situation, I have pointed out that one of the main components of the Boserup model (or "hypothesis") is that, with increase in "population pressure" on the land, one of the main trends in land utilization is reduction of fallow periods. Because of peculiarities of the conditions of secondary biotic succession in the Cheyenne and Arapaho settlement area, the ecology may be said to be (and to have been) intolerant of fallow in the sense of simply leaving areas idle after a period of use.

The study of secondary succession with respect to farming systems in Oklahoma and Kansas has encouraged a reevaluation of secondary succession models in other localities and in other types of ecosystems. Results cannot be said to be certain or very general as yet, but they do indicate that old conceptions of the value of fallow in many ecosystems may have been over-simplified or just plain wrong.²²

Another issue raised by the data presented in this dissertation has to do with the anthropocentric character of conceptions of "population pressure" in agricultural systems. There is evidence that Southern Cheyenne lands were overpopulated by workstock, and that the workstock were in competition with livestock of lessees for grazing and hay lands represented by inherited Indian allotments. The Indians wanted to maintain some allotments as reserve grazing areas, but they were often leased to cattlemen by the BIA in order to obtain cash to divide among multiple heirs. Boserup does discuss overpopulation by workstock, but

only as a side effect of human population pressure.²³

Another model of agricultural development discussed in this dissertation is the Von Thunen, or "Isolated State" model, in which population is a factor, but only in terms of aggregation of human populations in farm market towns and cities. The Isolated State model postulates that intensive farming of perishables will take place closer to market centers, while extensive farming of such crops as wheat and cotton will take place farther from market centers, except where local ecological conditions confound the picture. Examples of the partial validity of the model have been presented for certain areas at certain times. The model held fairly well for conditions of Kingfisher District farming just prior to World War I, and for conditions of Custer County Cheyenne farming in the middle 1920s.

On the whole, however, for both non-Indian and Indian farmers, the intensive production of perishables ("women's work") was complementary to the extensive farming of cash crops. The temporal element overrode the spatial. Perishables were a day-to-day product for marketing; cash crops were a seasonal matter. Moreover, the most important element in the marketing of cash crops was the ability of farmers, in cooperation, to hold crops off the market until their prices rose to a profitable level. Again, the temporal element was dominant over the spatial.

In the end, the most important dimension is the one that has been most emphasized by the theorists of "human capital," most prominently Theodore Schultz. Involvement of women in the farm industry raised the effective number of laborers on the land, even though overall number of laborers did not increase greatly (I refer primarily to the Cantonment

case). Accessibility of market centers in spatial terms was less significant than development of institutions of cooperation in marketing. In the end, the human dimension was most important.

NOTES

- 1 Letter to Mandell Creighton, 5 April 1887, reprinted in John Emerich Edward Dalberg-Action, Essays on Freedom and Power, selected by Gertrude Himmelfarb (Boston: The Beacon Press, 1948), p. 367
- 2 Bridgeport/Geary District Farmer John White to Concho Agent W. W. Scott, 4 October 1916, CAA, File "Farmers," OHSAMD.
- 3 Ibid., Geary District Farmer B. F. Bennett, Farmer's Report for week ending 10 February 1923.
- 4 Manuscript in the Joseph B. Thoburn Collection, File "Cantonment--Canadian River," OHSAMD. The signature on the manuscript is not decipherable. The author may have been a Quartermaster Sergeant at Cantonment at some time.
- 5 On Old White Horse, see Donald J. Berthrong, The Southern Cheyennes (Norman: University of Oklahoma Press, 1963; paperback edition, third printing, 1979), pp. 225, 349, 380, 393. On the character of Young White Horse, and the difference in attitude between the younger and older Dog Soldiers, see Henry C. Keeling, "My Experience with the Cheyenne Indians," Chronicles of Oklahoma 3 (April 1925): 61-64. For genealogical information concerning Young White Horse, see Heirship Hearings of Old Mrs. White Horse (Allottee no. 1807) and White Hair (no. 1819), Section X, File "Cheyenne and Arapaho: Heirship Hearing Materials," OHSAMD.
- 6 See Vinson Lackey, "The Forts of Oklahoma: Canontment," copy of newspaper article in Thoburn Collection, File "Cantonment--North Canadian," OHSAMD. Mr. Lackey's information came from interviews with Ebenezer Kingsley, at one time a clerk and district farmer at Cantonment, and married to a Cheyenne woman.
- 7 See proclamations in the collection, Volume Records of the Oklahoma Secretary of State, File "Executive Records, Oklahoma Territory, Vol. 1," OHSAMD.
- 8 Woodson to Cantonment District Farmer Jesse Hinkle, 9 August 1894, CAA, File "Darlington Letterpress Books, Vol. 46," OHSAMD.

- 9 Woodson to Cantonment Clerk-in-Charge Stephen Janus, 18 April 1896,
CAA, File "Darlington Letterpress Books, Vol. 61," OHSAMD.
- 10 See, for instance, statement of Red Leg, "Hearing Before E. B.
Meritt, Assistant Commissioner of Indian Affairs," 13 February 1920,
p. 6, CAA, File "Relations, Federal," OHSAMD.
- 11 Seger Agency, Annual Statistical Report for the year ending 30 June
1918, Section 5, p. 26, CAA, File "Agents' Reports," OHSAMD.
- 12 Ibid., Annual Statistical Report for the year ending 30 June 1919,
Section 5, p. 26.
- 13 Ibid., Seger Agency, Industrial Survey, 5 May 1922.
- 14 Cantonment Superintendent-in-Charge Horace E. Wilson to Cheyenne and
Arapaho Agent (Major) George Stouch, 27 May 1910, CAA, File
"Cantonment Letterpress Books, Vol. 7," OHSAMD.
- 15 Statistical Supplement to the Annual Report of the Commissioner of
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- 16 Johnson, Farmer's Reports for weeks ending 14 May and 18 June 1927,
CAA, File "Farmers," OHSAMD.
- 17 Lynch, Czech Farmers in Oklahoma, pp. 44-45.
- 18 See Gilbert C. Fite and Jim E. Reese, An Economic History of the
United States (Boston: Houghton Mifflin, 1959; second edition,
1965), figure 28.3, p. 560.
- 19 For a recent review of such generalizations, see Carol R. Ember,
"The Relative Decline in Women's Contribution to Agriculture with
Intensification," American Anthropologist 85 (June 1983): 285-304.
- 20 Theodore W. Schultz, Transforming Traditional Agriculture (New Haven
and London: Yale University Press, 1964), pp. 63-70.
- 21 See Stephen B. Brush, "The Concept of Carrying Capacity for Systems
of Shifting Cultivation," American Anthropologist 77 (1975):
799-811; Albert J. Ammerman, "Late Pleistocene Population Dynamics:
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- 22 See Charles J. Krebs, Ecology: The Experimental Analysis of
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- 23 Boserup, Conditions of Agricultural Growth, pp. 36-39.

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