Observing gender in the material cultures of six Northwestern Plains societies: An ethnographic/ethnohistoric comparison

Kathy La Plante
The University of Montana

Follow this and additional works at: https://scholarworks.umt.edu/etd
Let us know how access to this document benefits you.

Recommended Citation
https://scholarworks.umt.edu/etd/5358
Permission is granted by the author to reproduce this material in its entirety, provided that this material is used for scholarly purposes and is properly cited in published works and reports.

**Please check "Yes" or "No" and provide signature**

Yes, I grant permission √

No, I do not grant permission ______

Author's Signature: [Signature]

Date: 1-12-2000

Any copying for commercial purposes or financial gain may be undertaken only with the author's explicit consent.
# Table of Contents

Abstracts ............................................................................................................ i  
Acknowledgements ........................................................................................... ii

I. Introduction .......................................................................................................... 1  
   A. Why Study Gender on the Plains .............................................................. 3

II. The Study Area .................................................................................................. 7

III. Lifeways On The Great Plains ................................................................. 12  
   A. Plains Cultural Adaptations .................................................................. 12  
   B. Specific Tribal Organization .................................................................. 15  
   C. Discussion .............................................................................................. 20  
   D. Gender and The Division of Labor ......................................................... 22  
   E. Discussion .............................................................................................. 28  
   F. Gendered Relations On the Northwest Plains ....................................... 29  
   G. Discussion .............................................................................................. 33  
   H. Observing Gender In the Archaeological Record .................................... 34  
   I. Discussion .............................................................................................. 37

IV. Research Methods and Theory ........................................................................ 39  
   A. Theory ...................................................................................................... 39  
   B. Methods .................................................................................................... 40

V. The Data .............................................................................................................. 42  
   A. Material Cultures ...................................................................................... 42  
   B. The Spector Model .................................................................................. 43  
   C. Qualitative Data ...................................................................................... 57  
      1. The Crow .............................................................................................. 57  
      2. The Blackfeet ...................................................................................... 63  
      3. The Cheyenne, Northern Arapaho and Gros Ventre ....................... 67  
      4. The Eastern Shoshone ........................................................................ 69  
   D. Quantitative Data Analysis ..................................................................... 71  
   E. Interpretation ............................................................................................ 81  
   F. Discussion ............................................................................................... 86

VI. Conclusion .......................................................................................................... 106

VIII. Bibliography .................................................................................................... 113
In reviewing the literature concerning the Great Plains, there is no one document that allows archaeologists and cultural anthropologists to view Plains cultures at a glance. Rather, it is usually a process of pouring through numerous resources to find a comparison of cultures. Lowie provides some assistance in this matter, but then does not provide sufficient information of any one culture except the Crow (Lowie 1962, 1982). Even with his efforts, there are not enough data for archaeologists to use in interpreting either the prehistoric or the Historic past relating to gender issues. In this regard, there is very little in the way of method that assists researchers in studying gender on the Plains. Janet Spector (1982) and Diana Alexander (1992) offer ethnographic, accounts of other study areas, but no one has contributed to the Plains literature in this way. In the manner of these two authors, this thesis constructs a model for collecting ethnographic, ethnohistorical data of six historic tribes on the Northwestern Plains. The intention is to provide easily accessible data that can be used by archaeologists to reconstruct the past with future research emphasizing observation of gender in these cultures. It is a cross-cultural comparison of the Crow, Blackfeet, Cheyenne, Eastern Shoshone, Northern Arapaho and Gros Ventre. The primary focus is on seeing gender in the material cultures of these Plains groups and to assist researchers in looking for markers in the archaeological record of this area. The study area concerns Montana and Wyoming. The time period extends from the Late Prehistoric through the Historic era. The scope of work does not include a direct archaeological analysis of this data. Recommendations for future study, however, will be made at the end of this project.
Acknowledgments

I would like to express my gratitude for the patience and guidance provided by my thesis committee members, especially, Dr. William Prentiss (Chair). Thanks also go to Dr. Katherine Weist, Dr. Janet Finn and Dr. Mark Baumler. I wish to thank Susan Wingate for helping in the final editing and formatting of this report.
INTRODUCTION

The objective of this research is to create a framework for collecting and using ethnohistorical, ethnographic data of six historic Northwest Plains societies when looking for gender in the archaeological record of Montana and Wyoming. In the style of Spector (1982) and Alexander (1992), this project constructs a model of cultural data that can be used by archaeologists and cultural anthropologists in observing gendered markers of Northwest Plains groups. This model uses a cross-cultural analytical approach combined with post-processual method and theory in building a database for comparing the material cultures of six historic tribes known to have lived in Montana and Wyoming beginning from at least A.D. 1400 (Kehoe 1992). Ultimately, this thesis could act as a model for methodological research to build general and middle range theory for understanding Northwest Plains Indian task group organization with an eye toward observing gender.

Although thorough, this work is by no means comprehensive. It is, however, a good place to begin and can be a solid platform from which future Plains researchers can propel themselves more easily into studying deeper, more scientific observations of gender on the Great Plains.

Specifically, aspects of social organization, division of labor and task differentiation of the Crow, Blackfeet, Cheyenne, Northern Arapaho, Eastern Shoshone, and Gros Ventre are investigated and compared. (The term Gros Ventre, although outdated, will be used here for convenience and consistency instead of the term Atsina). Using the Spector Male/Female Task Differentiation Model, specific details of labor tasks concerning
twelve major activities, observed within each tribe, reveals certain patterns of seasonality, social organization, gendered specific tasks and material culture that can give researchers easily accessible data for clearer archaeological interpretations of the past. Quantitative data showing correlations between aspects of gender and elements of ecology and social organization will be provided in the methods section. By comparing these groups using these data, researchers can draw better conclusions when discussing the role of gender on the Northwest Plains.

Finally, this body of work will assist anthropologists in addressing specific research questions such as: how may we better recognize gender variation in the archaeological record, how might we apply this knowledge to better understand changes in social organization over time, and is it possible to determine the presence of gendered specific activities in material culture by observing and understanding seemingly unrelated aspects of life such as climatic change, wealth, and degree of social structure. This work supports future attempts by researchers to gain a deeper understanding of these most important issues.

For the future, it is highly recommended that researchers look toward a more comprehensive understanding of the primary literature available for data collection. Primary resources such as trader and trapper journals may reveal a deeper and broader representation of gender in the archaeological record than was presented here. Primary and secondary resources were consulted, but it is believed that a more thorough assessment of primary resources would shed new light on this study.
WHY STUDY GENDER ON THE PLAINS?

With different tribal cultural patterns, differences among specific men and women were often marked. Plains Indians were individualists, and Plains cultures included a wide range of roles for women as well as for men, a fact often obscured by the stereotypes so frequently accepted (Wood and Liberty 1980:5).

Kenneth E. Sassaman (1992), Phillip Duke (1991), Brian Hayden (1992), Margaret W. Conkey and Janet Spector (1984) all ask the question why study gender in archaeology? They are but a few to ponder this question. Sassaman states that “technology cannot be understood apart from society” (1992:71). He believes that technology is a labor process for harnessing nature that is basically a social aspect. It is from this social construct that instruments of work, such as tools, are joined with those who make and use them. The study of gender illustrates how this work of individuals is “divided, articulated, and coordinated” (Sassaman 1992:71). Gender, in fact, is the primary social factor of this labor process in forager style modes of production (Sassaman 1992).

Phillip Duke (1991) looks at four pre-contact period sites in the Great Plains region and concludes “that gender relationships have been treated as unimportant in hunter-gatherer societies because it is thought that these people were constantly coping with environmental challenges.” By exploring the relationships between gender and the use of space at Horse Creek, Wyoming, Todd Guenther (1991) challenges the premise of gender as unimportant in Plains societies. Guenther reports:

All strategies, whether generalized foraging or specialized hunting, were largely restricted to foothills, stream valleys, and breaks. When climate trends were favorable and plant diversity and game populations high, a fairly rich and secure way of life could be supported. However, this was dependent on high mobility, a generally portable technology, and large quantities of stored foods. Production of much of the food processing and storage fell to the women of the various cultural groups...In short, Plains hunter-gatherers were dependent on plant foods. Gathering wild plants,
typically considered women's work, necessitated that human groups be in specific areas at specific times when plants were available. Men, as hunters, could range farther from the camp, but those engaged in plant gathering needed close access to resource areas. Thus, both the seasonal round and choice of location, perhaps even the Horse Creek site, must often have resulted from the influence of women and their needs in the decision making process, if not being directly decided by them. The role of Shoshone women in food gathering activities gave them equal status with men (Guenther 1991:17-18).

Gendered space within campsites is revealed at the Horse Creek site in Wyoming and the Mini-Moon site in eastern Montana. Susan Hughes (1991) determined that piles of fire-cracked rock surrounding a large hearth in association with a pile of fragmented burned bone was the locale for a grease rendering process, specifically used by women according to ethnographic information. In addition, Hughes uncovered another hearth showing lithic tool manufacturing debris with more specialized tools than flakes. This area is interpreted as a men’s work area. Further, several hearths at Horse Creek were lacking in number and variety of artifacts, possibly indicating that these hearths were used solely for plant processing activities conducted by women (Claassen 1997). Although these examples are pre-contact reminders of the existence of gender relationships, these data are pertinent to the overall understanding of gendered markers in the archaeological record of the Northwest Plains.

One other example of why and how the study of gender is important as a part of archaeological research design regards the need to reinterpret earlier and well accepted works. This is an important step in looking for gender where we have not previously seen it. For example the following is a re-interpretation of a classic site discussed by Frison. Claassen asserts the following regarding gender as it relates to this well-known study.

*Although the Paleo-Indian Agate Basin site in Wyoming is believed by George Frison (1991:158-159) to be a bison-procurement location, the presence of two probable living structures (one with a well-defined hearth), grinding stones, 20,000 flakes, bone needles, and cut and incised rib sections...*
indicates that this site is better viewed as a base camp with women and children present (Claassen 1997:74).

This is a primary example of how some archaeological interpretations of the past have been, and to some extent remain, androcentric (Conkey and Spector 1984).

Brian Hayden (1992) asks whether gender can be studied, at all, at the level of prehistoric hunter-gatherer societies. He questions if social constructs such as past gender behavior, status, or attitudes can be reliably inferred from the archaeological record. His conclusion is that these issues can be teased out, but need much greater research and improvement of methods to accomplish this task. Hayden (1992) suggests that one of the best methods for this type of research lies within the comparative ethnographic model.

In 1984, Conkey and Spector asked the unthinkable in archaeology. By looking through the "lens of feminist criticism," they conclude that archaeology, like other traditional disciplines such as history, literature and social anthropology, has not been objective in its view of gender. They clearly state that archaeology was especially androcentric and needed to adopt a broader view of human culture with an increased understanding of gender. They further believe that archaeology has a much more difficult time in this endeavor "because archaeologists lack an explicit framework for conceptualizing and researching gender and - more widely- social roles..." (Conkey and Spector 1984:1-2). After this blistering critique of archaeology, many researchers responded to their call for action. The result is a plethora of literature. The most influential, overall, was and remains Janet Spector's Male/Female Task Differentiation Model (Spector 1982). This model quantitatively measures male and female activity
patterns by identifying “four interrelated aspects of task performance: the social, temporal, spatial and material dimensions of each task undertaken by any given group” (Gero 1984:25). It is precisely for this reason that Spector’s model is utilized for data compilation of the six Northwest Plains societies to be studied here. Combined with a cross-cultural comparison of these hunter-gatherer groups, the Male/Female Task Differentiation Model sheds new light on the daily activities of women, men and a third gender, often referred to in the literature as berdache (Callender and Kochems 1983). From the analysis of the resulting data, it is hypothesized that evidence of social organization, labor organization and, ultimately, gendered markers can be observed with greater clarity in the archaeological record of Montana and Wyoming.

Finally, a bonus goal of this project is to work toward a “peopled archaeology” (Claassen and Joyce 1997). The peopling of archaeology refers to attempts by current researchers to move away from simply assigning attributes to men or women in the past; toward a greater understanding of the need to “take gender to be a central dynamic social process and therefore a key category of analysis necessary for understanding technological systems” (Dobres 1995:55). Dobres encourages all archaeologists to focus on the challenges of methodology and theory building for observing gender in the past. Simply stated, if we as researchers do not ask better questions, improve methods and have more inclusive theoretical strategies, it is essentially impossible to see certain aspects of our archaeological history. Gender is, therefore, only one aspect missed in the overall picture of past humankind.
THE STUDY AREA

Grobsmith (1990) offers a fairly standard description of the Northwest Plains. She describes this region similarly to those provided by Wedel (1961) and Kehoe (1992) as a:

\[
\text{vast, flat, semiarid grasslands, sometimes called the North American grasslands, that stretches from the Mississippi-Missouri valley on the east and the Rocky mountains on the west, from coniferous forests of the Saskatchewan River Basin in Canada on the north, to the Rio Grande River in central Texas to the south (Grobsmith 1990:167).}
\]

This region of plains and prairie “forms a unique ecological zone which supported a wide variety of hunting and gathering as well as farming tribes long before the historic era” (Grobsmith 1990:167). The Great Plains has been considered to be a Great American desert (Kroeber 1939), fit for no human to inhabit (Wedel 1961). Anthropologists, historians and archaeologists have greatly debunked this myth (Schlesier 1994). The Plains archaeological record, for example, “provides evidence of major alterations in human lifeways in conjunction with climatic shifts and adaptive food technologies” (Wood and Liberty 1980:2). Today, we know that there was great ecological and cultural diversity on the land and in its people over time. For example, Bamforth (1988) makes a strong case for increased heterogeneity based on ecological factors. He concludes:

\[
\text{If regional environmental conditions became increasingly better suited to successful communal hunting over the long term, following the most successful hunters would tend to bring people together into larger and more permanent groups, which should then lead to greater heterogeneity. If conditions became increasingly more poorly suited to successful communal hunting over the long term, a leader’s success in the hunt would decline, and such groups should break up, decreasing heterogeneity (Bamforth 1988:128).}
\]

Guenther (1991) echo’s Bamforth’s ecological explanation of social organization by stating, “when precipitation increases, the vegetation recovers rapidly, followed by an increase in the number of fauna” (1991:9). Guenther, however, takes a different approach
to the study of the Northwest Plains and correlates gender as a major contributing factor in site location and camp movements as related to ecological factors. He reports that at the Horse Creek site in Wyoming, this camp was probably chosen because it, "provided ready access to numerous resources including plant foods, lithic raw materials, and game animals" (Guenther 1991:11). This statement is significant because:

*The area adjacent to the site is one of high vegetative diversity where elevational effects would prolong the harvest season for plant species, which would begin to ripen earlier in the fall at higher elevations. This helped offset logistical difficulties in seasonally prescribed hunter-gatherer movements. Large quantities of plant foods, which ripened at different times and in different months or seasons, could be efficiently obtained without having to move camp. This site location created an excellent opportunity to process and store provisions for winter consumption (Guenther 1991:11).*

In Guenther’s study, he makes the point that women were probably most instrumental in decision-making for camp choice and group movement because of their particular needs related to foraging activities. He also states, however, that it seems unlikely that men would remain idle during these peak gathering periods when they were not engaged in hunting. In his scenario, all people would have worked in a highly cooperative effort not adhering to a rigid set of rules determining the division of labor or task differentiation. Guenther and Bamforth emphasize hunting versus foraging activities in their respective studies, but they both agree that ecological factors were instrumental in creating or molding social organization by groups on the Northwest Plains both in prehistoric and historic times.

Although the entire Plains region spans about 1,500 miles from north to south and nearly 1,000 miles from east to west (Grobsmith 1990), this thesis deals primarily with the regions of present-day Montana and Wyoming. This is because the six tribes under
scrutiny were known to have inhabited this area during the Historic period. Since time lines cannot be too discreet when dealing with human cultures, the Late Prehistoric, the Protohistoric and Historic periods are all considered. This approach demonstrates aspects of cultural continuity and diversity in the archaeological record as will be seen in the data presented.

Typically, it is the appearance and diffusion of the bow and arrow that ushers in the Late Prehistoric period, usually reflected by Avonlea and/or side-notched points (Frison 1978). This time-period is generally accepted as being from A.D. 200-500 to 1541/1600 (Fagan 1995). Several pottery traditions also appear on the Plains during this time. “Shoshonean” and “Crow” ware are the two styles found at archaeological sites in Montana and Wyoming (Frison 1978). Communal bison hunting is also at its height during this period. Drive lines, jumps and corral techniques were used by most Plains groups to contain and kill bison or other animals (Frison 1978). The hunts usually took place in the fall to take advantage of prime hides for robe making. Additionally, spring and summer hunting was conducted by most groups as well. Because these early groups were pedestrian hunter-gatherers, they relied heavily on group cooperation within a band organization. They also had to have an intimate knowledge of the land, material resources, herd behavior and each other in order to assure success. Bows and arrows were used for large game hunting, being favored even after the introduction of guns (Fagan 1995). Meat was dried or made into pemmican. The importance of pemmican
will be discussed later. Frison (1978) believes that in addition to bison, hunters killed antelope, rabbit, and other small game to round out their subsistence strategy.

The Protohistoric period, according to Fagan (1995), encapsulates the historic era. This time period spans from A.D. 1541/1600 (later on the Plains) to modern times. The major and most dramatic technological change occurs as a result of the introduction of the horse (Fagan 1995). According to Lowie (1982), although horses were beginning to appear in certain North American tribal groups such as the Apache by 1630, horses did not diffuse to the Northwest Plains groups until later. Lowie (1982) estimates that the Shoshone were the first to receive the benefit of this animal technology, preceding the Blackfeet and Crow as equestrian groups. The Blackfeet and Crow did not acquire horses until around 1730. Ewers (1955), however, states that the Blackfeet acquired the horse around 1723-28. This is one of many examples where various authors differ in their opinions about dates. Clark Wissler (1910) named the period from A.D. 1540 to 1880 the horse culture period for the tribes of the Northwest Plains. The A.D. 1540 date seems too early as most groups were still involved in the "dog days."

Near the same time, the Northwest Trade gun was being dispersed from the Northeast by French and British fur traders. By A.D. 1670, the Assiniboine and Cree were already armed. This undoubtedly changed the balance of power in that region and ultimately led to the migration of some groups onto the Great Plains (Fagan 1995). The impact of the European fur trade combined with the diffusion of the horse and gun dramatically affected the lives of many indigenous groups. Many were displaced and
migrated to the Plains region from both the Great Basin (Shoshone) and from the northeast woodland areas (Cheyenne, Crow and Arapaho) (Lowie 1982). The forced relocation of these groups onto the Plains caused them to adopt different lifeways in order to survive in this new and challenging environment. These migration stories are quite complicated and often controversial. The details of each groups’ movements will, therefore, not be discussed in detail. Details are mentioned as needed to make the point that the arrival of Historic groups is considered, by some, to be a recent phenomenon (Kehoe 1992; Oliver 1962).

Since this work is a process of reconstructing the material cultures of the Crow, Blackfeet, Cheyenne, Northern Arapaho, Eastern Shoshone and Gros Ventre, it is crucial to discuss the unique lifeways created by each group. The following sections focus on a general discussion of social organization, division of labor and gender specific activities, which leads directly to the data involving task group differentiation. From these data, it is possible to postulate about the existence of gendered markers within these historic groups in the archaeological record. Although men and women are represented, a bias toward the observation of women in the activities mentioned is emphasized. This is an attempt to balance the androcentric nature of ethnographic, ehtnohistorical information as described by Conkey and Spector (1984). Special emphasis is also placed on the role of the berdache and manly-hearted women (Lewis 1941).
LIFEWAYS ON THE GREAT PLAINS

PLAINS CULTURAL ADAPTATIONS:

When discussing the social organization of the Plains Indians, it is important to consider which time period is being discussed. According to Symmes Oliver (1962), between 1600 and 1880, a particular lifeway was beginning to crystallize around the horse and the bison. Prior to 1600, however, Plains groups were pedestrian hunter-gatherers relying heavily on communal bison hunting, foraging of plant foods and procurement of small game (Frison 1978). The major difference between these two times regards the manner in which people hunted bison and the reasons. In earlier times, they hunted for primary subsistence. In later times, due to the flexibility the horse provided and the market for bison robes, they also hunted as a means of production. Social changes occurred as a result. In fact, Bamforth notes that “specific locations of the recent occupants of the Great Plains changed dramatically just before and after white contact” (Bamforth 1988:85). The size of groups expanded from the band in Prehistoric times (15-30 people), to the larger aggregations of tribal groups meeting several times of the year for bison hunting (Oliver 1962). The size of a group and its social complexity, therefore, is necessarily different depending on various social, economic, and environmental factors influencing decisions and resulting behaviors (Oliver 1962). Bamforth supports this idea by reporting “recent anthropological analysis of human adaptations to the natural environment emphasize three topics: diet, technology, and settlement patterns” (1988:1). All of these factors are considered in the following
analysis of Plains social organization. A fourth factor is being increasingly studied - human social organization- which emphasizes the adaptive problem solving strategies of a society that attempts to make group decisions and resolve conflicts without formal means of social control (Bamforth 1988). He further states that the solutions to material problems of human groups require cooperative labor or complex regional economic interactions that are only effective with certain social mechanisms (Bamforth 1988).

Ultimately, adaptive changes such as how subsistence resources were procured, how and by whom tools were produced and used, as well as how and why locations were chosen is a matter of human organization, to some extent, adapting to their environment. It is, therefore, a cultural-ecological combination of factors influencing a groups decision making process (Bamforth 1988).

In the case of the Great Plains, an abundance of archaeological, ethnohistoric and ethnographic data indicate that for the majority of time for the hunter-gatherer occupations, most of the materials needed for shelter, fuel and most components of their technology, derive from the North American Bison (Bamforth 1988). Whether bison drives, corrals or surround methods were employed, a great deal of either small or large group cooperation was required to make this a successful subsistence strategy. The type of social organization was dependent on the time period (bands of 15-30 people in prehistoric periods and tribal aggregations of 100 or more people in the historic era), the methods used to adapt to environmental conditions, technology, the social milieu, and the effects of European contact.
Since the “classic Plains cultures” (Oliver 1962) are a relatively recent phenomenon of short duration - less than three hundred years- (1600-1880), they offer a unique and interesting opportunity for research. Reeves (1990), however, estimates that after the adoption of the bow and arrow approximately 1500 years ago, the communal bison hunting culture achieved the complexity usually associated only with the Historic Plains tribes. Again, it is important to note the inconsistency in the literature regarding dates of arrival and places of origin when discussing the history of the Northwest Plains groups. For the purpose of consistency, Oliver’s work will be most cited. The term “classic” as stated by Oliver, is used loosely as there was great diversity on the Plains and no one group completely typifies these lifeways. When speaking of the Historic Plains tribes, it is clear that there was a distinctive beginning and ending to this era. Between the introduction of the horse and the near extinction of the bison, the Plains societies had a relatively short history (Oliver 1962). When these historic groups moved into the Plains arena, they had one major aspect in common. Even though all of the six tribes under study migrated into the Montana and Wyoming area from various different cultural and environmental settings, they all had to adapt to the ecological conditions of the Northwest Plains (Oliver 1962).

Further borrowing from Oliver’s model of social organization, the “true Plains” cultures were horse mounted, bison hunters who were a recent development. These groups came out of two fundamentally different economic and environmental settings exhibiting distinctive cultural variation. Some had been hunter-gatherers while others
were horticultural peoples before migrating to the Plains. These groups probably came from areas as diverse as the Basin Plateau (Shoshone) and the Eastern Woodlands (Cheyenne, Crow etc.). The ecological demands of the Plains created similar adaptations for these distinctive societies. The dynamic relationships between the people, bison, horse and environment set the stage for similarities in subsistence strategies, choice of habitation site, tool use and manufacture, and social organization. Although there were differences in clothing style, social relations and ritual practices/beliefs, the general lifeways of the Plains societies were strikingly similar, indicating a great deal of cultural homogeneity (Oliver 1962). As previously stated Bamforth (1988) challenges this concept of homogeneity as explained by Oliver. Bamforth demonstrates that increased heterogeneity occurs when ecological conditions are at their best contributing to greater social complexity within groups and probably between them.

By examining the specific social organizations of the respective tribes, it is possible to take a closer look at more intricate aspects of division of labor and gendered activities. Because culture has continuity and is fairly conservative, this approach leads to the possible identification of markers of gender (as it will be defined) in the Plains archaeological record.

**SPECIFIC TRIBAL ORGANIZATION:**

The only “true Plains” tribe of hunting and gathering origin included in this study is the Blackfeet. The origins of the Blackfeet are uncertain. Oliver provides conflicting information in this case. He states that they may or may not have had traditions of
agriculture and seems to have always been a bison hunting people, but even he is uncertain of the Blackfeet origins. Kehoe suggests that the Blackfeet lived from at least A.D. 1400 on both sides of the Alberta-Saskatchewan border (Kehoe 1992). She says they lived:

_in bison-hide tipis for a few days or weeks, as the success of the hunt, or the attraction of berry bushes, prairie turnips, or sheltered winter-lodge sites dictated. Impounding of bison herds by luring and then stampeding them into corrals provided the depended-upon staple, but other game was stalked or trapped; fish were disdained. All possessions had to be carried on the backs of humans or dogs, or in bundles lashed between two short poles (the travois) tied to a dog's shoulder harness so that the animal could drag the burden. Dogs were carefully bred large and strong for this purpose, but could never approach the capacity of horses for transportation. Thus, the people could own only a few material goods, and their tipis were small, 8 to 10 feet (3 meters) in diameter at the base (Kehoe 1992:296)._

There was only one time during the year that the Blackfeet came together as a tribe in one place. In late summer, before the Sun Dance, they aggregated for a communal bison hunt (Oliver 1962). According to Ewers (1968), the summer season was the only time of the year when bands came together in large groups to either camp or hunt. The rest of the year, the tribe was divided into several bands and may not see each other from one summer to the next. The primary economic and social unit of the Blackfeet was the band. This band organization was very fluid. A tribal chief could be informally selected, but had little real authority. Status among the Blackfeet was primarily a matter of horse ownership. Raiding was, therefore, important in this regard (Oliver 1962). It is not clear whether pre-horse Blackfeet groups also experienced this type of social differentiation and resulting status. It is certain, that status and wealth were a by-product of the acquisition of the horse. They began acquiring horses around A.D. 1730 and this dramatically changed the nature of their social organization. Interestingly, however,
gender was not a factor in preventing women from obtaining increased status and wealth as in other Plains tribes.

The “true Plains” tribes of farming origin included in this study are the Cheyenne, the Crow, the Gros Ventre and the Arapaho. According to Oliver:

*the case of the Cheyennes is refreshingly clear, thanks to the researches of the archaeologists. During the eighteenth century and for the early years of the nineteenth, the Cheyennes were living in earth lodges and growing maize, beans, and squash. They first had the horse around 1760, and by 1830 they had become a typical nomadic Plains hunting tribe (Oliver 1962:29).*

The Cheyenne bands were united only during the summer months for ritual ceremonies or communal hunts. The only other time they gathered in large groups was infrequently to move enmass against an ancient enemy. From October to June, the tribe was broken into band camps, which scattered within the Cheyenne territory where water and winter pasturage for horses could be secured. Hunters could also cover a wide range of land in search of game. This pattern of social organization was necessary for tribal survival. They once tried to remain together year round and almost perished as a result (Oliver 1962). Leaders were formally selected and exerted actual authority and power. Cheyenne social structure was based on the tribal council of forty-four Peace Chiefs. In summary, the conditions of the Great Plains demanded that Cheyenne life be lived in small bands to allow for hunting and gathering, while social systems were flexible enough to aggregate for protection, communal hunting or from aggression by hostile enemies. The band provided the logical happy medium between the insecurity of the unprotected extended family group and the unwieldy size of the tribe (Oliver 1962).
Having fissioned from the Hidatsa, the Crow were also a people with farming roots. Their culture and history parallels that of the Cheyenne as a result. The Crow came together as a united tribe for communal hunts and ritual ceremony such as the Sun Dance. The tribe was divided into three bands, which were politically autonomous. Two of the three bands split into separate groups in the winter months and re-united in the spring (Oliver 1962). Lowie (1963) mentions that the tribe stayed together from spring until the traditional break-up in the fall. The question of leadership is unclear. Oliver (1962) relates that there was no actual tribal chief, but each band had several men who were referred to as chiefs. According to Lowie (1963), the term chief may not imply any real government function. It may simply be a label implying achieved status from warfare or raiding.

The Gros Ventre appear to be early inhabitants of the Plains, although their early history is not well known. It is known, however, that they separated from the Arapaho only in relatively recent times. Since the Arapaho seem to have farming roots, it is reasonable to assume the Gros Ventre did also. Oliver (1962) admits that this is clearly an assumption, as there is no real proof at this time. Kehoe (1992) mentions that, like the Blackfeet, the Gros Ventre were using horses by 1754. The tribes gathered together from April until early fall to participate in a tribal hunt. After November, they separated into groups of several bands to seek camps along watercourses for winter shelter and protection from enemies. There were twelve fairly autonomous bands that moved around the countryside in search of game and plant foods. Each band appears to have had a
recognized head or chief who was informally selected. This title was bestowed on whoever had distinguished himself in war (Oliver 1962).

The last group of this category is the Arapaho (Oliver 1962). Indirect evidence of their early history indicates that they were once a horticultural people. Although their history is also not well known, it is believed that the Northern Arapaho lived in settled agricultural communities. At the beginning of the Historic period, however, they had become a mounted bison-hunting people of the Plains who had lost all ties to a horticultural background. They lived and moved in bands as did other Plains groups, coming together to hunt bison. During the summer, the Arapaho came together to hunt bison using a surround method. For the remainder of the year, they lived and moved in small groups according to their seasonal round system. The Arapaho had no single tribal chief. They were divided into four bands, each having their own formally inducted leader. Their decisions were supported and carried out by Soldier Police companies. The Arapaho were closely allied with the Cheyenne and participated in an elaborate Sun Dance ceremony almost yearly (Oliver 1962).

The Eastern Shoshone is included in Oliver’s (1962) category of peripheral hunting and gathering tribes. Oliver mentions this category, but does not give an explicit explanation of its meaning. It is presumed that he is attempting to include societies from the Great Basin and, as a result, calls the Shoshone a peripheral group. He notes that the whole tribe of Wind River Shoshone took part in the bison hunt in the Fall. After this, they split into four bands in search of winter camps. They re-united in the spring for a
second bison hunt. Two charismatic chiefs were chosen one who was wise and could lead the group effectively while the other was a war chief. These positions were not hereditary and did not allow for the exercise of judicial functions (Oliver 1962). Lowie (1982) states that the social organization of the Shoshone was relatively simple compared to other Plains societies. Over time, however, “the more simply organized Great Basin groups developed a more complex organization” (Oliver 1962:6).

DISCUSSION:

These “true Plains” societies shared similar social patterns of aggregating bands in the summer months, while dispersing the rest of the year. During the equestrian era, bands of twenty-five to one hundred people were the basic unit of Plains groups. This size was optimal for handling a bison drive. Communal hunting, whether in large tribal groups or smaller bands, was without question the best source of food and resources for Plains peoples (Kehoe 1992). According to Kehoe (1992), although the band acknowledged the leadership of a man knowledgeable in hunting the final word in camp decision making, however, often went to a wise and respected matron. By strength of character, a proven record and the exhibiting of overall wisdom, she would often become the cornerstone of the group on which families depended. Kehoe seems to be referring to women in a general sense, not necessarily those in positions of leadership.

With men frequently away on raids, trading expeditions, or hunting, women were the mainstay of daily life in camp and the arbiters of all that concerned the family. They needed to be brave, strong, and independent to care for and protect the children. They processed nearly all the raw materials brought into camp, transforming carcasses into comfortably furnished tipis stocked with handsome clothing and nutritious provisions. Men were generally considered incapable of mastering crafts other than weapon making, and were inept even in slicing meat for pemmican. The old Lady, as she was and is titled,
who brought up a family in fine tipis, whose skills all admired, whose age proved her to be blessed by the almighty - hers was and is the quiet but firm voice none will gainsay (Kehoe 1992:313).

These are very strong statements that appear to contradict or at least challenge much of the information previously reported by Oliver. It is not clear where Kehoe draws her conclusions from, although the notes in her book indicate that she synthesized much of her information from other ethnographic works by Wissler, Ewers, Mooney, Moore, Weist, G. Campbell, Lowie, Wood, Fowler and others. Because these statements are somewhat strong, it is conceivable that some might question her conclusions. This information, however, does seem to support statements made by Guenther (1991) regarding women’s role in camp site location and band movement decisions. It is important to represent contradictory points of view in this discussion of the role of gender on the Northwest Plains.

According to Oliver (1962), all “true Plains” tribes shared a basic pattern of informal leadership. Individualism and cooperation were characteristics highly prized by Plains groups. Cooperation could not be coerced and, therefore, became an individual option. The only exceptions to this rule were when traveling through hostile territory or when organization was needed for a successful communal bison hunt. In these cases, personal autonomy was sacrificed with cooperation dictating in favor of discipline that ultimately protected the group and contributed to overall effectiveness for the hunt (Kehoe 1992).

It is somewhat cliche to mention that the diffusion of the horse and the gun greatly altered the balance of power among Plains societies. Along with the spread of European infectious diseases, the social structures of these groups necessarily changed and adapted.
This is particularly true in relation to issues of gender, as will be seen later. Social organizations had to adapt to both ecological pressures and to outside cultural influences such as warfare, trade, European diseases, and technological changes (including the horse and gun) diffusing onto the Plains. Within a relatively short period of time, formerly pedestrian lifeways that had existed for thousands of years, eventually gave way to nomadic equestrian bison hunters. Dramatic events occurred that forever changed the lives of all the inhabitants of the Northwest Plains during the historic time period. It clearly made little or no difference where a group of people originated. Once arriving onto the Plains with the collision of ethnic groups, guns, horses, and the necessity of relying on bison, all groups adapted in remarkably similar ways overall. Archaeologically speaking, gender markers, especially regarding women’s activities, may not prove to be too difficult to discern since much of the activities and tasks performed in the areas archaeologists study were dominated by what we consider women’s work. We must learn to observe gender, however, within its full spectrum before making general statements about what is really women’s work versus men’s work.

**GENDER AND THE DIVISION OF LABOR:**

Guenther (1991) believes that the extant ethnographic data often oversimplifies issues regarding hunter-gatherer sexual divisions of labor. He states that many sources suggest that certain tasks including cooking, hunting, or stone tool manufacture were
accomplished exclusively either by males or females according to a rigid universal rule.

He asks:

would women defer from sharpening their own tools if a man was not present? And would a man just returned from a hunt not prepare a meal if the women were absent from camp? Thus a cooking fire might not be an exclusively female locus of activity. In short, the boundaries of gender organized tasks are not clearly understood. This is the problem that plagues interpretations of gender dynamics in the archaeological record (Guenther 1991:9).

Nelson (1997) takes a much stronger stand in discussions of how archaeological research has sometimes dealt with questions of division of labor in the past. Although some aspects of her argument have undoubtedly changed somewhat, she contends that overall many scholars still adhere to the following concepts. She argues these people hold the belief that:

What women and men do as a consequence of their gender roles in various societies, and how particular tasks may be gendered or not, are often treated as if they were straightforward, even obvious. In fact these are vexing and difficult topics. Cultural Anthropology has been as much a hindrance as a help, with its universalizing tendencies regarding women’s roles and activities as mothers, and with men’s roles and activities, though more varied, nevertheless stereotyped. These ethnographic analogies, if they are not used with extreme care, may lead down blind alleys (Nelson 1997:85).

Those blind alleys, according to Nelson (1997), are inevitably linked to two basic assumptions: 1. The category (women) means mothers and all women are necessarily limited to this role of caretaker - their work is exclusively only compatible with childcare; 2. The division of labor is absolute. The first rule assumes women’s work is repetitious and dull. It is the same everywhere in space and time in all cultures. It is not worthy of academic or scientific research and is overall, uninteresting. The natural consequence of such thinking has been that early researchers either overlooked women in the archaeological record, rendering them invisible or simply attributed women’s work to
men. The view of cultures, then, is that men created anything having to do with being human and civilized (Nelson 1997).

The second rule presupposes that the division of labor is absolute; meaning that if men do it, then women cannot or are somehow prohibited from doing it. This holds true for both men and women. Nelson (1997) claims that G.P. Murdock (1968) is known for making these assumptions. He asserts that “humanness” begins with hunting and gathering societies and claims that the division of labor is strictly biologically determined.

Nelson presents a very strong point of view and it is more likely that many of her assumptions have already been disputed. Since the 1970s, many researchers from a variety of academic disciplines have adequately dispelled many of these assumptions (Gero and Conkey 1991; Dahlberg 1981; Ehrenberg 1989; Spector 1993; Guenther 1991; Bonvillain 1989; Kornfeld and Francis 1991). Judith Brown (1970) notes that the division of labor is a universal, but believes that the contributions made by women regarding subsistence, for example, is markedly different from society to society. One example of archaeological stereotyping results from research conducted at an Ecuadorian village were male and female use areas “were delineated based on stone chips, grinding stones, and, the association of these grinding stones with fragmentary female figurines...” (Bruhns 1991:420). Assumptions were drawn from the beliefs in old world archaeology that “ladies grind, cook, and worship; men chip stone, hunt, fight, and presumably rule” (Bruhns 1991:420). Ethnographic reports, however, contradict these beliefs by demonstrating that in South America, metates are used for “non-culinary activities and
are also industrial tools used to grind dye-stuffs, cosmetics, pigments for painters and potters, the clay and aplastics for the potters, to break up lime to burn for plaster and to crush ores, fluxes and charcoal for the smelter” (Bruhns 1991:423). So before assuming a metate is a women’s work tool, it is essential to understand the social and economic make-up of a specific culture. In Ecuador men weave and make clothing, while women engage in field labor or market vending. As a result, the men become the childcare provider to include carrying, feeding, dressing, and washing diapers (Bruhns 1991).

There are two very difficult challenges when discussing issues of division of labor and observing gender in the archaeological record. The first challenge is concerned with the belief by many that value is assigned to activities or tasks according to a western conception of industrialized worth and aspects of production. In this Eurocentric view, women’s work is not of interest, because they do not “earn” a living or meet the standards of valuable work such as in the “Man the Hunter” or “Man the Toolmaker” frameworks (Nelson 1997:90). In this case, women’s work is not worthy of study (Nelson 1997). The second problem often cited for overlooking or rendering women invisible in the archaeological record is because women’s work is perishable. That is to say that the activities women engaged in or tasks they performed included the use of perishable tools such as wood, plants, etc. (Nelson 1997). These early assumptions have necessarily colored our view as archaeologists when conducting research. It is indisputable that many of the tools women utilized were perishable, but this does not give license to simply ignore half the prehistoric or historic population. It is more a matter of creating better
methods and data collection in order to begin to see women, children, the young and old in the material remains of a culture. It is important first to acknowledge what has happened to hamper our research and to then take steps in correcting the disparity. It is both important and possible to develop ways of knowing and observing gender in the archaeological record in general and specific to the Northwest Plains region.

Joan Gero (1991) discusses women’s roles in stone tool production to counteract the belief that stone tool making is a male invention and knapping is a male occupation. She contends that among many contemporary archaeologists, it is predominately men who learn to replicate stone tools, not women. When discussing stone tools in research, it is often in regard to patterned tools and those requiring preparation of a core for manufacture (Nelson 1997). Gero, however, challenges this assumption by stating that males alone are not responsible for producing the tools that dominate the archaeological record. Ultimately, Gero introduces:

>a theoretical perspective that recognizes gender as a dynamic and critical construct in social life and one that provides entry into studying the organization of prehistoric social labor. It will be a significant outcome of this study to show that engendering tool production does more than map females onto the prehistoric record; it also provides a framework for reconstructing gender relations as they are mediated by material culture (Gero 1991:164).

Although her statements are in relation to prehistoric peoples, they are just as pertinent to protohistoric and historic groups who utilized stone tools. She attempts to define and differentiate tools versus utilized flakes; making the point that utilized flakes are tools. Hayden reports seeing Australian Aborigines “using only unretouched blocks of stone for chopping wood” (Hayden 1977:179). The difficulty with this type of tool classification lies in whether we can determine if flakes were used as tools or not. It we
could determine this factor, more flakes would be considered tools. Without this knowledge, Gero (1991) believes that none of these would be classified as tools and this would unfortunately obscure the bigger picture of a society. In Gould’s ethnographic study of Australian Aborigines, he notes” that both men and women were observed picking up and using sharp flakes for butchering and other domestic tasks” (Gould 1977:164). It is Gero’s belief that women in prehistory not only used stone tools, but probably made stone tools.

Let us start with the simplest assumptions: females comprised approximately half of all prehistoric populations, and these women carried out productive activities at prehistoric sites. We suspect, moreover, that women were especially visible and active in household contexts where they played significant roles in household production and household management (Moore 1988:32). Almost ironically, women can be expected to be most visible and active precisely in the contexts that archaeologists are most likely to excavate: on house floors, at base camps and in village sites where women would congregate to carry out their work. Prehistoric women are probably disproportionately represented in densely concentrated areas of household refuse, and archaeological materials from the central areas of base-camp or house-floor excavations are at least likely to be associated with women’s work.

As women work in association with such living areas, they need tools for the tasks they carry out. Although the kinds of tools women need would clearly vary from culture to culture and from task to task, it is inconceivable that they sat and waited for a flake to be produced, or that they set out each time to borrow one. Women clearly required ready access to efficient working edges in their routine work, and they must have manufactured them as needed. Since the user of a tool is in the best position to judge its adequacy, it makes sense that women produced many of their own tools, and indeed it would be most inefficient for them to rely on men for these needs (Gero 1991:169-170).

There are several examples of women making stone tools ethnographically and ethnohistorically (Gould 1977; Hayden 1977), one example is most relevant to this discussion of the Northwest Plains region.

A companion to the Lewis and Clark expedition reported seeing ‘squaws chipping flakes into small arrow points, holding the flake in their left hand, grasping between a piece of bent leather, and chipping off small flakes by pressure, using a small pointed bone in the right hand for that purpose... (Gero 1991:170).
Access to raw materials and quarrying activities is another domain considered male. Some “Australian accounts clearly report that while men flake the stone at quarry sites, it is women’s work to carry it away...” (Gero 1991:172). In quartzite quarries in Eastern Wyoming, there is evidence of quarries being visited by large residential groups, presumably of both sexes where huge quantities of flakes and partially reduced bifaces were taken away (Gero 1991). It, therefore, appears that men may not have total control over lithic procurement and the production of stone tools increasing the chance of discovering gendered activities in the primary archaeological record of the Northwest Plains, i.e.: the lithic assemblage.

Biological strength is often used as arguments limiting women’s role in tool making. Gero has determined that upper body strength is not an issue preventing women from making tools where technique is the determining factor rather than force. Numerous accounts demonstrate that women, in fact, are often the burden-bearers, carrying out heavier labor tasks than males. This will certainly be made clear in the ethonographic data collected on the Northwest Plains.

DISCUSSION:

Ultimately, division of labor is not universally determined by sex roles and mere biology. Tasks are often assigned by age, class or ability, according to the cultural norms of any given society. Attempting to make blanket statements about the division of labor is, therefore, not possible. It is a multi-layered issue with a variety of outcomes.
depending on a complex set of factors that must be understood and considered in the context of a specific culture. Even though Plains societies had similar adaptations to the region, probably due to ecological adaptation according to Bamforth (1988) and Guenther (1991), there is enough evidence of cultural variation within and between the six societies making this discussion relevant. These differences, although somewhat small in the overall scheme of things, are worth mentioning. They cast shadows on the commonly held assumptions about gender and the division of labor as previously seen in the archaeological record of the Northwest Plains societies.

GENDERED RELATIONS ON THE NORTHWEST PLAINS:

It is not altogether commonly understood that sex is a result of biological phylogeny, while gender is a cultural construct. The question of gender is more easily answered by stating what it is not. Gender is not simply about biology. It is not merely a matter of anatomical differences between males and females. Cultures, like our own, generally define gender through a person’s biology resulting in only two genders [male and female]. In other cultures, however, particularly in some Plains societies, there are more than two genders. A person’s gender is more fluid and can change according to age, stage of life, socio-economic status and ritual practices, wherein gender can be given ceremonially (Callender and Kochems 1983). Defining precisely what gender is must, therefore, be a relative process.
One example of this in Native California populations is the case of the Two-Spirit Undertakers living among the Chumash (Holliman 1997). The author explains the difficulty of studying gender by stating: “Confusing terminology, the conflation of many distinct statuses, and bias on the part of observers have hampered attempts to describe and examine the many aspects of two-spirit and alternative gender roles” (Holliman 1997:175). The difficulty in naming gender roles stems from the fact that the information was collected in the first four decades of the twentieth century and “by that time, cultural disruption and assimilation had obscured gender and its manifestations. The lack of obvious features, such as transvestism, and its denial by native consultants made investigation of alternative genders extremely difficult” (Holliman 1997:176).

The importance of gender in archaeology in this case comes from the discovery of skeletal remains revealing sex differences in degenerative-joint-disease patterns of the undertakers. Early accounts obscured the actual sex of these highly regarded people in Chumash societies. With careful study of skeletal remains, it was determined that these people were actually men whose spines were impacted by many years of digging. This hard labor was probably done with a digging stick to gouge the earth out in making graves. The fact that these men were buried with digging sticks and baskets also supports the hypothesis that this was a third gender with a very specialized activity in support of the social structure of the Chumash. Holliman stresses this point in studying gender:

*in most North American societies, two-spirits were not simply men who adopted women’s clothing or work. They were members of a third gender with clothing, ornaments, and occupations unique to the gender. These individuals probably would be numerically less frequent than “true males” in cemetery populations, and statistically rare burial accompaniments found with male skeletons might point to an occupational specialization or status associated with two-spirits (Holliman 1997:186).*
Dobres (1995) discusses the link between gender and social agency of ancient material culture production. Here she focuses on gendered labor practices regarding technology. Dobres (1995) states that gender relations are "especially salient social processes concerned with identity and difference...Gendered identities, practices and ideologies are inscribed onto the everyday world of material resources and power through the knowledge, skill, production of access to and use of material culture" (1995:1).

Conkey (1991) simply states that gender is a dynamic historic process. She warns against attempting to define gender as an "it" without recognizing the variability inherent in this concept as it is played out in contemporary as well as ancient cultures. Her statements support the need to view gender in a relative term depending on the group under study.

On the Northwest Plains, this concept of gender is no less confusing and difficult to see in the archaeological record. In the case of the Crow, the berdache is a type of third gender. Although Lowie (1963) speaks of this social phenomenon somewhat derogatorily, he does attribute the sacred task of chopping down the first tree for the Sun Dance lodge to berdache. Regarding the actual ritual, Lowie writes, "and the berdache fell to chopping down the tree. It represented the enemy to be killed as a result of the Sun Dance and all the people accordingly shouted and shot at it, young men striking it with their coup-sticks" (Lowie 1963:313). Simply stated, a male berdache is a biological boy who, early in his life, is attracted to female activities and is allowed to fully participate in
this lifestyle without ridicule or loss of status. It occurs, sometimes, that these boys
dream of this lifestyle and accept it as their life’s path. As a result, they dress in female
attire and conduct themselves in everyway female (Callender and Kochems 1983).

The term berdache in early reports almost always referred to males. Today, however,
we know that there was a female counter-part to this social relationship. Evelyn
Blackwood (1984) refers to these females as cross-gendered and disdains the term, third-
gender. Her discussions highlight the fact that not all cultures emphasize the role of
female subservience to men. She focuses on several American Indian groups, particularly
those of the Plains, “that shared a basically egalitarian mode of production in precolonial
times” (Blackwood 1984:28). In her study, she found evidence of at least thirty-three
American Indian tribes participating in some type of cross-gendered female roles as a
viable social relationship. She notes for the Northwest Plains area, the societies known to
have representation of cross-gendered females were the Blackfeet, Crow and Kutenai.
For the Great Basin, she includes the Shoshone. Blackwood explains:

that women’s ability to assume the cross-gender role arose from the particular conditions of
kinship and gender in these tribes. The egalitarian relations of the sexes were predicated on the
cooperation of autonomous individuals who had control of their productive activities. In these
tribes women owned and distributed the articles they produced, and they had equal voice in
matters affecting kin and community. Economic strategies depended on collective activity.

Lineages or individuals had no formal authority; the whole group made decisions by consensus.
People of both sexes could achieve positions of leadership through skill, wisdom, and spiritual
power. Ultimately, neither women nor men had an inferior role but rather had power in those
spheres of activity specific to their sex (Blackwood 1984:32).

As in the case of the male berdache, a girl came to accept this as her role in life and
adapted accordingly. She showed a preference for male activities and lived a typical male
role in her society. Like the boys, she could have received this message in a dream or she
could have been born with the propensity for male activities. Learning the skills of a man, however, made her unmarriageable as a woman. As a cross-gendered female, she could successfully compete for a wife, care for children and provide for a household in the same way as a man. Her tasks included hunting, trapping, cultivation of crops and fighting in battles (Blackwood 1984). As in the case of the Blackfeet, women could and did achieve high status and wealth in the same ways as men. Lewis (1941) writes about the “manly hearted women” demonstrating this point. Among the Northern Piegan, for example, a woman could raid for horses, make war, hunt and was then able to attain great wealth and status just as any man in her tribe. Lewis notes that among the Blackfeet, bravery and war deeds were not as important as wealth and generosity. The ascension to power, then, was as achievable for a woman in this culture as it was for a man (Lewis 1941).

DISCUSSION:

In terms of gender equality, Blackwood (1984) notes that while most Plains societies assigned tasks according to a fairly typical division of labor by sex, the allocation of these separate tasks “establishes a system of reciprocity that assured the interdependence of the sexes because neither set of tasks was valued more highly than the other, neither sex predominated” (Blackwood 1984:33). This concept of gender could only have arisen in a society that promoted cooperation and flexibility in social relationships. Gendered tasks often overlapped among Plains people allowing individuals to engage in activities
typically performed by the other sex without incurring ridicule or disfavor (Blackwood 1984). Woman Chief of the Crow and Running Eagle of the Blackfeet were two striking examples of women stepping outside the commonly accepted gender roles and achieving status and wealth in their respective societies (Denig 1961; Lewis 1941). Given the nature of androcentrism and ethnocentrism in ethnographic and historical accounts of Plains societies, one might speculate about how truly widespread this social phenomenon may have been in actuality.

What does this mean for reading the archaeological record of the Northwest Plains region? Simply stated, it is that caution be used when assuming anything regarding gender and task differentiation on the Northwest Plains. It is essential to understand the social context of an artifact before attributing it to a male or female task.

OBSERVING GENDER IN THE ARCHAEOLOGICAL RECORD OF THE PLAINS:

Kornfeld (1987) and Spector (1982) agree that explicit treatment of gender systems in archaeological investigations, both in general and in Plains archaeology, are rare (Kornfeld 1987; Spector 1982). It is the view of Spector (1982), and Conkey and Spector (1984) that androcentric ways of observing data systematically bias all or nearly all scientific pursuits. Kornfeld and Francis (1991) believe this to be true regarding Plains archaeology. The question of the invisibility of women dominates the feminist literature. Women are not invisible in the archaeological record; rather it is in how we look or do
not look for them in the material remains of a culture. It is also a matter of how our own biases may be coloring our perceptions (Kornfeld and Francis 1991). Duke (1991) asks if it is either necessary or possible to see gender in the archaeological record. He asserts that it is both possible and important to observe gender, but admits that it will take much better methods and a great deal more research to make sense of this social construct in the material record of the past. He further states that any archaeological gender study must necessarily deal with three fundamental issues: “1. The identification and archaeological recognition of different gender groups; 2. The definition of the actual relationships between genders; 3. An assessment of the extent to which analysis is influenced by the ideological biases of the interpretations themselves” (Duke 1991:280).

Close examination of ethnographic and ethnohistoric accounts of Plains societies reveals a much more varied and wider scope of female activities and of male activities as well. In terms of an expanded role for men, Guenther (1991) supports the notion that men probably did not sit idly by and starve to death if women were not in the camp available to cook their meals. They also, more than likely, participated in seasonal foraging at peak times especially when not involved with hunting activities. In terms of women’s expanded roles, females played central symbolic and ritual roles in the religious activities of the Kiowa Apache, Cheyenne, Arapaho, Cree, Gros Ventre, Blackfoot, and Sioux (Weist 1980). Additionally, Blackfoot, Crow, Gros Ventre, Mandan Pawnee, and Cheyenne women participated in warfare and could also count coup (Weist 1980).
It is believed that Late Prehistoric period settlement and subsistence strategies were primarily a continuation of Archaic lifeways. Some researchers postulate that dramatic changes in gender roles occurred after contact as a result of the socio-economic and political upheavals experienced by Native American groups as a result of participation in the EuroAmerican economic system. In general, women’s status decreased, and economic inequalities between men and women developed, perhaps accounting for the ‘slave-like’ conditions of women described in many historic narratives (Komfeld and Francis 1991:445).

Komfeld and Francis (1991) argue that the division of the latest period of Plains society occupation, the EuroAmerican period, can be further sub-divided into several subperiods. They reason that due to the fast pace and resulting dramatic changes, several very different settlement and subsistence strategies were created by Plains groups. They believe that these subdivisions should be studied separately.

Bamforth (1988) explains that European contact led to an initial expansion of long-term social systems and lifeways, rather than causing their constriction. Ultimately, contact caused the demise of these societies, but initially by being thrust onto the world scene economically, Plains groups essentially expanded their production of bison robes that led to greater wealth, status and hierarchical social organization. This may have led to an increase in power for men in some societies, while causing a decrease in power and status for women at the same time. In Bamforth’s view, these economic and social changes were a result of the more favorable ecological conditions that created an environment rich with bison for the taking. Combined with technological changes represented by the horse and gun, people had the ability to increase their wealth and status. This was particularly true for men in most societies. The opportunities to achieve
status, power and wealth was also enhanced for women of the Blackfeet and Crow societies.

DISCUSSION:

Considering the above, what types of gender systems might we see on the Plains? In Binfordian terms, high residential mobility characterizes band societies (Binford 1980). Depending on which subperiod is under investigation, these groups typically resemble the forager groups of the Bushmen of Southern Africa (Binford 1980; Lee 1979), which characteristically exhibit an egalitarian social structure. This implies equal access to resources and power distribution among adult group members. In this case:

\textit{task group organization also appears to be fairly undifferentiated, with all members essentially conducting the same sorts of activities. Under these circumstances, gender roles are expected to be undifferentiated and fluid. Given the lack of food storage often exhibited by foragers (Binford 1980), fluid gender roles, as related to subsistence tasks, may confer adaptive advantages during times of resource stress (Kornfeld and Francis 1991:447).}

These researchers speculate that the Late Prehistoric period, especially the later portion, witnessed the development of a variety of gender systems on the Northwest Plains. Although these authors give no explicit information as to what these gender systems were, they report that changes would be related to “interaction with larger, complex settled groups and possibly by conditions of trade with these groups” referring to the horticultural societies along the Middle Missouri River Valley (Kornfeld and Francis 1991:447). Additionally, gender systems would have necessarily adapted to “intensification of communal bison hunting, the development of interaction and exchange systems, and horticultural practices” (Kornfeld and Francis 1991:447). Gender systems
may have led to dramatic differences in status and gender inequality as greater social complexity developed. As European contact thrust the Northwest Plains societies into a newly developing world economy, men had greater opportunities to achieve wealth and status in ways probably never experienced on the Plains before this time. Simultaneously, some scholars believe that these economic conditions caused the status and power of Plains women to sharply decline in direct correlation to men’s rise in power and wealth (Kornfeld and Francis 1991).

The most dramatic changes in gender systems most likely occurred beginning in the Protohistoric Period and becoming even more differentiated for some groups in the Historic era. Since the mode of production changed from production for subsistence to production for exchange, the social systems became more ranked and unequal for some. Women’s labor became exploitive and men became dominant (Kornfeld and Francis 1991). European contact with its diffusion of guns, horses and infectious diseases, dramatically and irrevocably altered the social, political and economic landscape of the Northwest Plains and, therefore, greatly influenced gender systems as well.

What we see in the archaeological record must, therefore, take into account the time period as well as cultural aspects of Plains groups when determining gender.
RESEARCH THEORY AND METHODS

THEORY:

Choosing a theoretical platform from which to observe gender on the Plains is challenging. It appears, however, that the most appropriate approach is postprocessualism. The use of the term in this context refers to the VanPool and VanPool (1999) discussion. The basic premise supported here is that while postprocessualists have challenged the positivist view of processual archaeology, postprocessualism is in fact compatible with scientific method. Science, in this view, is an attempt to provide supporting empirical data in current research and to prevent return to the days of speculative archaeology or the telling of “just-so stories.” Since this work focuses on social organization, gender systems and task differentiation based on material culture and relies on quantifiable data, it is believed that this is proper use of a postprocessualist theoretical model. The framework for gathering ethnographic/ethnohistorical data follows the precepts of the scientific model in the VanPools’ (1999) scheme of scientific method. The basic goal is to uncover “observable consequences” of behaviors exhibited by social actors in Northwest Plains societies (VanPool and VanPool 1999). Although social systems by themselves cannot be quantified, the artifacts that remain, can be seen and measured with empirical data. The method of data collection proposed by Spector (1982), helps to build the theoretic framework and provides structure to a given hypothesis or proposition regarding gendered specific tasks and the resulting archaeological markers.
It is the blending of postprocessualist theory with empirical methodology and ethnographic comparisons in the manner presented here that adequately challenges traditional processual assumptions of gender on the Northwest Plains.

METHODS:

Conkey and Spector (1984) provide the most sound approach in terms of method to this type of study. They report and discuss the relative success of employing either ethnoarchaeological or ethnohistorical analytic frameworks in the study of gender in archaeology. They caution researchers, however, to be aware of the extent of androcentrism and how it biases this type of work. Additionally, Hayden (1992) promotes the use of the comparative ethnographic approach. Although he agrees with cautionary statements about using extant ethnographies, he does not agree that they are as biased as Conkey and Spector report. Like most dialectic controversies, there is truth on both sides.

The choice of using the Spector Male/Female Task Differentiation Model was made because she “has designed an analytic framework that can be used either to organize observations of gender behaviors and materials among living groups or to re-analyze information about gender available in existing primary or secondary written sources” (Conkey and Spector 1984:24-25). This model focuses on material cultures in attempting to observe gender dynamics regarding tasks or activities. It is a tool “more sensitive to and allows for variable and changing configurations of human division of labor” (Conkey
and Spector 1984:25), while minimizing the effects of androcentric bias in extant ethnographies. The tool highlights the parameters of male and female activity patterns (Conkey and Spector 1984). The actual mechanics of the model will be discussed in the section outlining specific material cultures of the Crow, Blackfeet, Cheyenne, Gros Ventre, Northern Arapaho and Eastern Shoshone. Ultimately, the Task Differentiation Model will support bridging arguments for extrapolating information backward in time with the archaeological record. It is, essentially, a model for building middle range theory regarding Plains groups. To support this model, qualitative data provides information specific to each of the Plains societies discussed with emphasis on females, cross-gendered people and different age groups who participated in various activities described.
THE DATA

MATERIAL CULTURES:

There are essentially five steps to the construction of Spector’s Male/Female Task Differentiation Model (Conkey and Spector 1984). The first step is to identify the tasks performed by people of a given society. In this case, these societies are the Crow, Blackfeet, Cheyenne, Northern Arapaho, Eastern Shoshone and Gros Ventre. For this project, there are twelve major activities identified. These tasks are performed by most Plains groups and involve some sort of tool use. Tools, in this case are defined by Gero (1991); for example containers and hides are considered tools.

The second step involves the social dimensions of task differentiation. These factors include sex, age and the number of people involved in the performance of the activity. This aspect identifies the who and how of task performance. It is important to describe these social dimensions as precisely as possible to show social relationships (Conkey and Spector 1984).

The next step is to place the task in time. The frequency and duration of the task describes temporal dimensions. This can indicate scheduling and the tempo of everyday life (Conkey and Spector 1984).

Next is the spatial dimension. This aspect indicates where each task is performed. Some tasks are only performed at a certain location within the site while other tasks are more fluid. This dimension is particularly important in differentiating gender systems. It
can be useful in determining “between gender arrangements and archaeological site formation processes and site structure...” (Conkey and Spector 1984).

Finally, this framework focuses on the material dimensions of each culture. It is from this grouping that archaeologists can begin identifying artifacts to associate with gender. In essence, this approach allows for detailed and quantifiable data to examine and compare performed activities according to gender. Because the model is cross-culturally applicable, it also allows for cultural comparisons at a glance (Conkey and Spector 1984). Although a great deal of information is presented here, the cultural lifeways of Plains groups were far more complex and diverse than initially believed making it impossible to include all aspects of their material culture. This work will allow future researchers to build onto this framework and hopefully, apply new, more revealing methods for observing gender in the Northwest Plains archaeological record.

THE SPECTOR MODEL:

This section presents data on the six Plains groups under study. The following tables provide both qualitative and quantitative data in the Spector format. These tables are supported by qualitative data at the end of this section. Information was drawn from the following sources: the Crow, Denig (1961), Lowie (1963, 1982), Frison (1967, 1978), Oliver (1962); the Blackfeet, Ewers (1955, 1958, 1968), Lewis (1941), Blackwood (1984), Kehoe (1992), Lowie (1982), McLaughlin (1970), Reeves (1990), Oliver (1962); the Cheyenne, Oliver (1962), Kehoe (1992), Lowie (1982), Grinnell (1961), Elkin (1940,
<table>
<thead>
<tr>
<th>SOCIETIES</th>
<th>TASK</th>
<th>SOCIAL UNIT</th>
<th>TASK SETTING</th>
<th>TASK TIMING</th>
<th>TASK MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROW</td>
<td>HUNTING</td>
<td>Mostly men; women and bertsche for communal bison hunt or small game</td>
<td>On Plains for communal bison hunts; in river bottoms or near water sources</td>
<td>At least 2x per year (fall and spring) for communal bison hunts; as game was needed and available any time of year</td>
<td>Bows and arrows even into Historic Period, guns later as they received repeating rifles; use of corrals, drives requiring timber or stones for caisns, robes for scaring bison along drive line, mauls for bashing dying bison</td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>HUNTING</td>
<td>Family groups during dog days; men and women into Historic Period</td>
<td>Near water holes; on Plains for communal hunts; at stream crossings; drives over cliffs using natural landscapes; corrals surrounds after contact</td>
<td>Communal bison hunting at least 2x per year during fall and summer; antelope drives as game is available; small game daily if attainable</td>
<td>Bow and arrow unitl and even after the gun; dogs then horses to pull travois in transporting butchered meat; harnesses and poles; rawhide packs, clubs, lances; tools (knives, scrapers, resharpening tools etc.) made of stone, bone and antler, mauls and small animal traps</td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>HUNTING</td>
<td>Men, women and children in dog days for communal bison hunting and continued into Historic Period with antelope drives</td>
<td>On Plains for communal hunts; at favorite fishing holes; in river bottoms or near water sources for small game; poked sticks in holes to drive out groundhogs</td>
<td>Daily for small game as available; fall communal bison hunts and spring hunting grounds; whitetail deer in winter</td>
<td>Decoys for communal bison hunts; bow and arrows, lances, rawhide snares for whitetail deer; tools (knives etc) made from stone/bone or antler; barbed sticks for driving out groundhogs; fishing poles/lines/and hooks made out of bone or antler or possibly fishing traps made out of willow branches</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>HUNTING</td>
<td>Men individually, or small groups; women and children fished</td>
<td>Communal drives using landscape and caisns during pedestrian day; used drives even after horses when numbers of horses were low; surround method when horses were plentiful</td>
<td>At least 2x per year for communal bison hunts (full and spring); as required when small game was available</td>
<td>Lances, bow and arrows; travois with dogs in early times, horses later; travois and harnesses, packs and leather straps for securing and transporting meat</td>
</tr>
<tr>
<td>NORTHERN ARAPAHO</td>
<td>HUNTING</td>
<td>Bison drives required whole families in dog days; small groups of men later or larger tribal hunts in Historic times; individually for small game</td>
<td>Communal drives along drive line, mauls for bashing dying bison</td>
<td>Best time for robe hunting was from (Oct. 15-Nov. 15); 15-25 men could kill 1,000 bison in a fall hunt; communal hunt in spring for one month in April, trapped fur-bearing animals usually in winter months; daily for small game and sporadic winter bison hunting</td>
<td>Bow and arrows, later rifles, metal knives after contact; pre­contact, stone/ bone or antler tools; stones or debris for caisns on drive lines; timber for impounds; dogs w/travois until horses w/packs; leather straps to secure meat</td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>HUNTING</td>
<td>Whole band in dog days for communal bison hunting; men in small groups or individually, or large groups in Historic period for tribal hunts</td>
<td>Best time for robe hunting was from (Oct. 15-Nov. 15); 15-25 men could kill 1,000 bison in a fall hunt; communal hunt in spring for one month in April, trapped fur-bearing animals usually in winter months; daily for small game and sporadic winter bison hunting</td>
<td>Bows and arrows, later rifles, metal knives after contact; pre­contact, stone/ bone or antler tools; stones or debris for caisns on drive lines; timber for impounds; dogs w/travois until horses w/packs; leather straps to secure meat</td>
<td></td>
</tr>
<tr>
<td>SOCIETIES</td>
<td>TASK</td>
<td>SOCIAL UNIT</td>
<td>TASK SETTING</td>
<td>TASK TIMING</td>
<td>TASK MATERIALS</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------</td>
<td>---------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CROW</td>
<td>FORAGING</td>
<td>Women and children; berdache;</td>
<td>Small groups of women and berdache set out to find favorite gathering patches</td>
<td>Spring and summer or according to their seasonal rounds for (wild cherries,</td>
<td>Digging sticks; rawhide containers or baskets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>couples in love</td>
<td>for plant foods; daily for fuel</td>
<td>plums, service berries, roots, wild turnips, carrots, bitterroot and potatoes</td>
<td></td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>FORAGING</td>
<td>Women and children; men</td>
<td>Near campsite or at favorite gathering areas for plant foods; while moving</td>
<td>Spring and summer usually or according to their seasonal round system when</td>
<td>Digging sticks; leather containers or baskets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>occasionally</td>
<td>to new campsite or hunting; daily for fuel</td>
<td>foraging for berries and fruits, wild turnips and roots</td>
<td></td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>FORAGING</td>
<td>Women and children in small</td>
<td>At favored patches or while on the move to another campsite; in one campsite</td>
<td>Usually during the morning hours in spring or summer or according to their</td>
<td>Dibble sticks with antler handle for digging; absence of fishing; leather or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>groups of 2-3 or 15-20</td>
<td>above the Grand river, women planted corn until 1840; daily for fuel</td>
<td>seasonal round system; sought Indian turnips, Lily root, prickly pear fruit,</td>
<td>basket containers</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>FORAGING</td>
<td>Women individually or in small</td>
<td>Near dwellings of campsite for fuel or short distances to favorite berry</td>
<td>Spring and summer or according to their seasonal round system; daily for</td>
<td>Digging sticks; pottery for storing and carrying items; leather or basket</td>
</tr>
<tr>
<td></td>
<td></td>
<td>groups</td>
<td>patches etc.; daily for fuel</td>
<td>fuel or as needed; roasted pine nuts, juniper berries, bread from</td>
<td>containers</td>
</tr>
<tr>
<td>NORTHERN ARAPAHO</td>
<td>FORAGING</td>
<td>Women and children</td>
<td>Berries and currants grew in profusion along the headwater streams</td>
<td>Daily for fuel gathering, as part of seasonal rounds in summer and spring,</td>
<td>Digging sticks and leather or basket containers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>or as available</td>
<td></td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>FORAGING</td>
<td>Women and children, usually in</td>
<td>At favorite berry patches or known plant food locations according to their</td>
<td>Spring and summer or as available; dried for winter use in the winter</td>
<td>Digging stick; rawhide or basket containers for carrying or storing; drying</td>
</tr>
<tr>
<td></td>
<td></td>
<td>small groups</td>
<td>seasonal round schedule; groups often traveled far to obtain favored produce</td>
<td>months; Rose berries all winter long</td>
<td>racks or the use of willow trees for drying foods</td>
</tr>
</tbody>
</table>
## The Spector Model

<table>
<thead>
<tr>
<th>SOCIETIES</th>
<th>TASK</th>
<th>SOCIAL UNIT</th>
<th>TASK SETTING</th>
<th>TASK TIMING</th>
<th>TASK MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CROW</strong></td>
<td>DWELLINGS</td>
<td>Women and</td>
<td>At occupation sites near water or timbered area for protection; on open</td>
<td>Seasonal moves at least 2x per year in connection with communal bison hunts; for summer and winter camps or as necessary</td>
<td>Hides; bone for fastening pins; 4 poles as a base to hold up other poles; rawhide straps; stones for securing the lodge and for cooking hearths; paints and horse hair brushes for decoration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>berdache</td>
<td>Plains for summer communal hunts; in timbered river bottom in winter for</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>made</td>
<td>protection from the elements and enemies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>conical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>lodges; one to three persons could assist in the manufacture of one lodge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>covering</td>
<td>and with the erection of the structure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BLACKFEET</strong></td>
<td>DWELLINGS</td>
<td>2-3 women</td>
<td>At habitation sites on Plains in warmer months for communal bison hunts; in</td>
<td>Whenever move was required for relocation to summer or winter camps or as part of a hunting strategy; at least 2x per year for communal bison hunting</td>
<td>Skin coverings; pole; leather straps; stones for hearths and tipi rings to hold down covering; paints and brushes for decoration</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>timbered river bottoms in winter months</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CHEYENNE</strong></td>
<td>DWELLINGS</td>
<td>Women, 2-3</td>
<td>Near water or sheltered sites; had a fixed plan for the location of lodges</td>
<td>At least 2x yearly according to communal bison hunting rounds or for summer and winter camping</td>
<td>Hides; 3 poles as base poles to hold up others; leather straps; stones for tipi rings and cooking hearths; stone mauls to drive stakes into the ground</td>
</tr>
<tr>
<td><strong>EASTERN</strong></td>
<td>DWELLINGS</td>
<td>Women, 2-3</td>
<td>At occupation site near river bottoms in winter or open Plains in summer</td>
<td>At least 2x per year for summer and winter camping or in connection to communal bison hunting</td>
<td>Hide coverings; 4 base poles to hold up others; stones for tipi rings and hearths; rawhide straps; mauls for pounding stakes into the ground</td>
</tr>
<tr>
<td><strong>SHOSHONE</strong></td>
<td></td>
<td>per tipi</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NORTHERN</strong></td>
<td>DWELLINGS</td>
<td>2-3 women</td>
<td>On Plains in summer; in sheltered nooks along clear water streams in winter</td>
<td>At least 2x yearly for summer and winter camps; as required for hunting or to follow game</td>
<td>Hides; 3 poles; skin hide coverings; stones for tipi rings or cooking hearths</td>
</tr>
<tr>
<td><strong>ARAPAHO</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROS VENTRE</strong></td>
<td>DWELLINGS</td>
<td>Women, 2-3</td>
<td>In camp sites near water sources; on open Plains in summer for communal bison</td>
<td>New coverings manufactured every 3 years; yearly repair usually in summer or after fall hunt; moved 6-8 times in summer to keep up w/bison; moved in spring after bison hunt; whenever move was required for tracking game, at least 2x per year for summer and winter camps</td>
<td>Wooden pins for securing flaps; hides; 3 poles; rawhide straps for securing poles; stones for tipi rings and cooking hearths; wooden stakes and mauls to pound them into the ground</td>
</tr>
<tr>
<td>SOCIETIES</td>
<td>TASK</td>
<td>SOCIAL UNIT</td>
<td>TASK SETTING</td>
<td>TASK TIMING</td>
<td>TASK MATERIALS</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-------------</td>
<td>--------------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>CROW</td>
<td>TRANSPORT</td>
<td>Family units in dog days; larger groups in equestrian days; women used large dogs first; later used horses; men also used horses later</td>
<td>As a part of camp movement or hunting parties; hauling butchered meat or fuel</td>
<td>Seasonal moves at least 2x per year; fuel daily</td>
<td>dogs; horses; harnesses, poles, packs or baskets; pottery; small children secured to travois or on sides of horses with leather straps or cradle board apparatus; pots and pans after European contact strapped to sides of horses; dwellings dragged by dogs or later packed on horses</td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>TRANSPORT</td>
<td>Family units w/dogs initial; later used horses; women packed and did most of the work regarding transport of household items or butchered meat etc.; men carried hunting weapons etc.</td>
<td>Whenever a move was necessary to follow seasonal rounds or hunting</td>
<td>Minimum of 2x per year for summer and winter camps; fuel daily</td>
<td>Travois; poles; harnesses; packs later for horses; baskets; pottery and rawhide containers for carrying items</td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>TRANSPORT</td>
<td>Women, dogs and later horses</td>
<td>At kill sites to carry butchered meat home from communal hunts; at least 2x per year or as necessary to follow game</td>
<td>At fall hunt or to set up summer or winter camps; fuel daily</td>
<td>Travois; harnesses; pole; rawhide or basket containers</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>TRANSPORT</td>
<td>Women, dogs and later horses</td>
<td>Enroute to new campsite or near camp for fuel or water transport; packed robes and hides for trade</td>
<td>Daily fuel and water, as part of summer and winter camp movements or as necessary for seasonal rounds schedules</td>
<td>Hide or basket containers; travois; harnesses and poles; horses and dogs</td>
</tr>
<tr>
<td>NORTHERN ARAPAHO</td>
<td>TRANSPORT</td>
<td>Women and girls; dogs and later horses; minimum of 4-5 horses for riding and 2 for packing in equestrian days</td>
<td>As part of camp movement or hunting strategies</td>
<td>Daily for fuel and water; as part of summer and winter camp relocation and hunting as needed</td>
<td>Poles; harnesses; rawhide straps and containers; baskets; horses and dogs</td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>TRANSPORT</td>
<td>Women using dogs first and later horses</td>
<td>As needed for tracking game; relocation of camp</td>
<td>6-8 times in summer needed to move camp and winter camp movement</td>
<td>Travois; animals with packs; harnesses; rawhide and basket containers with straps to secure</td>
</tr>
</tbody>
</table>
The Spector Model

<table>
<thead>
<tr>
<th>SOCIETIES</th>
<th>TASK</th>
<th>SOCIAL UNIT</th>
<th>TASK SETTING</th>
<th>TASK TIMING</th>
<th>TASK MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROW</td>
<td>Butchering and Tanning</td>
<td>Women and berdache individually or in small groups; men as needed on small hunting excursions</td>
<td>At or near kill site after bison hunt for butchering; tanning at or near lodge; at or near campsite by men on hunting or raiding parties</td>
<td>After any communal hunt or individual hunt; tanning took place during a 2-3 day period usually in warm months for drying on racks</td>
<td>Drying racks to dry butchered meat or hung from willow branches; hides staked out on ground for tanning; wooden stakes and mauls to pound them into the ground; fleshing tools made out of stone/bone/antler, scrapers, knives of stone until contact when metal became available; fire for smoking meat or hides; boiling stones and containers and sinew A.D. 1720 stone knives until contact introduced metal; scrapers; drying racks; fleshing tools; mauls and stones for pounding rawhide; rope</td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>Butchering and Tanning</td>
<td>Small parties of both men and women for butchering at communal hunts; tanning by individual women or small work groups for sociability</td>
<td>At kill site for butchering of communal hunt; tanning near lodge</td>
<td>Whenever hunt occurred or men on raiding or small hunting parties for food; tanning took 2-3 days for one hide to be processed</td>
<td>White buffalo robes; highly developed leather working techniques and tools of bone/stone/antler until contact introduced metal; toothed scrapers; flesher, drawblade=willow w/sharp bone splinter to remove hair from hide; bison scapula for softening after brain mixture had been applied; smoking and drying racks</td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>Butchering and Tanning</td>
<td>Women traded bison hides and robes with Mandans and Hidatsa for corn; profits from this trade belonged to women; individually or in small social groups</td>
<td>Butchering at kill site for communal hunts; individually by men on hunting or raiding excursions; women butchered small game also; tanning near lodge</td>
<td>Butchering = at least 2x per year at communal hunts; when game was plentiful, tanning in summer months (1 woman could prepare 10 skins per year working from 2-3 days per hide; 2 could produce many more which may have led to increased use of polygeny in historic era</td>
<td>Produced white; yellow and brown buckskins; water for tanning; fire; knives and scrapers; fleshing and tanning tools made of bone/stone/antler until contact introduced metal; scrapers; drying racks; mauls and flat stones for working hides</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>Butchering and Tanning</td>
<td>1-2 women per hide or in small social work groups; men individually on hunting trips or raids; men and women butchered at bison hunts</td>
<td>Near lodge for tanning; at kill site for large scale bison butchering</td>
<td>After communal hunts at least 2x per year; took 2-3 days to dry and stretch tanned hides</td>
<td>Bone/stone/antler tools for butchering and tanning (knives, scrapers, flesher etc) until metal in contact era; drying racks or staked out on ground for working hides; mauls-stakes</td>
</tr>
<tr>
<td>NORTHERN ARAPAHO</td>
<td>Butchering and Tanning</td>
<td>Women, 1-2 or in small groups for tanning; men and women at communal hunts for butchering; men individually on hunting or raiding excursions</td>
<td>After communal hunts for butchering; tanning near lodge</td>
<td>After any communal hunt; tanning in warm months for drying and working hides; small game butchered as needed</td>
<td>Bone/stone/antler tools for tanning and butchering (knives, scrapers, mauls and flat stones for pounding hides), rocks and fire for smoking and drying hides and meat; stakes to stretch hides and drying racks for meat</td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>Butchering and Tanning</td>
<td>Women did the tanning individually or in small work groups</td>
<td>Tanning near lodge or in work area near camp; butchering at kill site or near lodge area with small game</td>
<td>Nov. and Dec. after fall bison hunt; 1 woman could produce 20 bison robes; must devote 60 days to the task; butchering after hunts or as needed with small game</td>
<td>Bone/stone/antler tools for tanning and butchering (knives, scrapers, mauls and flat stones for pounding hides), rocks and fire for smoking and drying hides and meat; stakes to stretch hides and drying racks for meat</td>
</tr>
<tr>
<td>SOCIETIES</td>
<td>TASK</td>
<td>SOCIAL UNIT</td>
<td>TASK SETTING</td>
<td>TASK TIMING</td>
<td>TASK MATERIALS</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------</td>
<td>------------------</td>
<td>---------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>CROW</td>
<td>POTTERY</td>
<td>Women individually</td>
<td>Near lodge or in tipi using cooking hearth to fire or dry pots</td>
<td>In summer months and made as needed</td>
<td>Clay or mud with temper; fire</td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>POTTERY</td>
<td>Women individually</td>
<td>Near lodge in campsite using circular fire pits</td>
<td>Whenever needed; probably in warm weather</td>
<td>Formed clay and temper; flat-bottomed or globular; not decorated with paint; incised on rim-neck or sides</td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>POTTERY</td>
<td>Women individually</td>
<td>Near lodge</td>
<td>In warm months as needed</td>
<td>Clay and temper</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>POTTERY</td>
<td>Women individually</td>
<td>Near lodge or in tipi using cooking hearth to fire pots or carve steatite</td>
<td>In warm months for firing clay or in colder months to carve steatite containers as time allowed</td>
<td>Flat-bottomed; carved steatite; stones for carving, clay and temper, fire</td>
</tr>
<tr>
<td>NORTHERN ARAPAHO</td>
<td>POTTERY</td>
<td>Evidence is contradictory; but Lowie mentions oral traditions indicating pottery as a lost art</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>POTTERY</td>
<td>Women individually</td>
<td>Near lodge or in lodge using cooking hearth to dry pots</td>
<td>Unknown</td>
<td>Black mud mixed with grease or tallow; dried by setting near campfire</td>
</tr>
<tr>
<td>SOCIETIES</td>
<td>TASK</td>
<td>SOCIAL UNIT</td>
<td>TASK SETTING</td>
<td>TASK TIMING</td>
<td>TASK MATERIALS</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------</td>
<td>------------------------------------</td>
<td>---------------------------------------</td>
<td>-----------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>CROW</td>
<td>TOBACCO GROWING</td>
<td>Men = tobacco planters; women = tillers of the soil and feast preparation</td>
<td>Wind River at the base of the mountain or at a chosen sacred site</td>
<td>Late April for planting; late August for harvesting</td>
<td>Bundles of wood; bison shoulder blade hoes; or iron after contact; tobacco seed; pipes/drums/rattles and beaters for ritual; wood for fire; pemmican; bowls of food for feast; willows for threshing</td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>TOBACCO GROWING</td>
<td>Women and men</td>
<td>A chosen site near camp</td>
<td>In spring, only for ceremonial use</td>
<td>Bison hoes until metal after contact; willows for threshing</td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>TOBACCO GROWING</td>
<td>Women</td>
<td>In the vicinity of occupation site; only until 1802 in river bottoms</td>
<td>Planted and harvested corn; beans; squash and tobacco until 1802 upon their return from the summer bison hunt</td>
<td>Travois; hide containers; bison scapula hoes; containers for carrying and storage</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>TOBACCO GROWING</td>
<td>Information is sketchy and indicates that they may have traded for tobacco not grown; used it for ceremonial purposes</td>
<td>Wind River at the base of the mountain or at a chosen sacred site</td>
<td>Late April for planting; late August for harvesting</td>
<td>Bundles of wood; bison shoulder blade hoes; or iron after contact; tobacco seed; pipes/drums/rattles and beaters for ritual; wood for fire; pemmican; bowls of food for feast; willows for threshing</td>
</tr>
<tr>
<td>NORTHERN ARAHAO</td>
<td>TOBACCO GROWING</td>
<td>Little information available; probably traded bison products with the Arikara for tobacco and maize</td>
<td>Late April for planting; late August for harvesting</td>
<td>Bundles of wood; bison shoulder blade hoes; or iron after contact; tobacco seed; pipes/drums/rattles and beaters for ritual; wood for fire; pemmican; bowls of food for feast; willows for threshing</td>
<td></td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>TOBACCO GROWING</td>
<td>Probably traded bison products with village tribes for tobacco</td>
<td>Late April for planting; late August for harvesting</td>
<td>Bundles of wood; bison shoulder blade hoes; or iron after contact; tobacco seed; pipes/drums/rattles and beaters for ritual; wood for fire; pemmican; bowls of food for feast; willows for threshing</td>
<td></td>
</tr>
<tr>
<td>SOCIETIES</td>
<td>TASK USING</td>
<td>SOCIAL UNIT</td>
<td>TASK SETTING</td>
<td>TASK TIMING</td>
<td>TASK MATERIALS</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------</td>
<td>---------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CROW</td>
<td>TOOL USING</td>
<td>Men, women and berdache; men mostly for war and hunting weapons; women using mauls to dispatch bison and household implements; berdache same as women</td>
<td>Outside lodge or in quarry site for projectile point manufacture; at hunting and butchering sites; anytime a woman needed an implement to produce or manufacture an item requiring tools (containers, scraper, knives, mauls, grinding stones etc.); resharpening at hunting or basecamps</td>
<td>As needed for expedient use or for specialized tools</td>
<td>Stone/bone/antler, wood, metal after contact; sinew, rawhide, leather straps; shaft straighteners; pitch or some type of glue; grinding stones, mauls, war clubs, lances, shields in equestrian era; willows for basket making; stones for boiling; boiling bags</td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>TOOL USING</td>
<td>Men and women</td>
<td>In lodge or near tipi; at quarry sites; at basecamps or hunting camps especially for resharpening projectile points</td>
<td>Anytime a weapon or tool was needed for manufacture of household goods or for expedient use in the processing of foodstuffs etc.</td>
<td>Stone/bone/antler; rawhide; sinew; stone for mauls and grinding implements; willows or grass for basket making; arrow straightener; pitch or glues</td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>TOOL USING</td>
<td>Women for household items mostly and men for hunting and war making</td>
<td>Near lodge or at quarry site</td>
<td>As needed</td>
<td>Stone/bone and antler; grass for weaving baskets; mauls for breaking up firewood and cracking large bone and to pound berries etc.</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>TOOL USING</td>
<td>Actual information is lacking, but probably followed similar methods and techniques as other Plains groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NORTHERN ARAPAHO</td>
<td>TOOL USING</td>
<td>Probably similar to other groups</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>TOOL USING</td>
<td>Probably similar to other groups</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

52
<table>
<thead>
<tr>
<th>SOCIETIES</th>
<th>TASK</th>
<th>SOCIAL UNIT</th>
<th>TASK SETTING</th>
<th>TASK TIMING</th>
<th>TASK MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROW</td>
<td>WAR MAKING</td>
<td>Men, women and berdache</td>
<td>Women were taken on war parties or horse raiding excursions at times to cook and mend clothing/moccasins; &quot;Woman Chief&quot; was a renowned warrior</td>
<td>In retaliation against enemies or to act in defense of camp; women cooked and mended as necessary</td>
<td>Cooking utensils (pots, boiling bag, knives, spoons, cups etc.); made of stone/bone or antler; lances; bow and arrows; shield; knives; horses and tack; war clubs</td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>WAR MAKING</td>
<td>Men and women</td>
<td>As a part of raiding of other groups camps for captives or in protection of own people; in revenge as with the Shoshone for giving them smallpox; &quot;Running Eagle&quot; was a Piegan woman warrior</td>
<td>When in need of women and children to replenish tribe; or for revenge at will</td>
<td>Bow and arrows, lances; hide shirts until the shield replaced this body armor after the gun; war clubs; knives</td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>WAR MAKING</td>
<td>Men and boys at about 15-16 when they went on their first war path</td>
<td>Neighboring tribes for raiding or capture of captives</td>
<td>To earn honor and prestige for brave deeds; less emphasis on captive taking or revenge</td>
<td>Circular shields; lances; war clubs; bow and arrows; guns after contact</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>WAR MAKING</td>
<td>Men</td>
<td>While enroute to hunting grounds traveling through enemy territories or in defense of tribe</td>
<td>Possibly at least 2x yearly as result of communal hunting practices</td>
<td>Bow and arrows; later guns; shields; lances; war clubs; knives; poison for arrow tips; coups sticks and horses</td>
</tr>
<tr>
<td>NORTHERN ARAPAHO</td>
<td>WAR MAKING</td>
<td>Men</td>
<td>At enemy camps or on open ground; acts of valor for status seekers</td>
<td>In spring in defense of tribe or to increase status by brave acts in war; as required for survival</td>
<td>Lances, bow and arrows; later rifles; horses and shields; rattles</td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>WAR MAKING</td>
<td>Men, 10 or more</td>
<td>In defense of camp or groups set out to increase personal status with show of bravery</td>
<td>As required for survival or status seeking</td>
<td>Bow and arrow until guns arrived; lances; war clubs; shields; knives</td>
</tr>
<tr>
<td>SOCIETIES</td>
<td>TASK</td>
<td>SOCIAL UNIT</td>
<td>TASK SETTING</td>
<td>TASK TIMING</td>
<td>TASK MATERIALS</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------</td>
<td>---------------------------</td>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CROW</td>
<td>HORSE RAIDING</td>
<td>Men, women and berdache</td>
<td>In enemy camps or out on open Plains</td>
<td>As necessary to replenish herds or to acquire greater herds; to gain status and wealth</td>
<td>Weapons and horses</td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>HORSE RAIDING</td>
<td>Men and women; as small groups; couples or individuals</td>
<td>At enemy campsites or on open Plains when encountering the enemy</td>
<td>As necessary to replenish herds or to gain status and increase wealth and prestige</td>
<td>Ropes or harnesses; horses and weapons; no lances, shields or war clubs were taken after the introduction of the gun</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>HORSE RAIDING</td>
<td>Men individually or in small groups</td>
<td>From Crow camps mostly</td>
<td>Whenever possible</td>
<td>Horses; weapons; harnesses or ropes</td>
</tr>
<tr>
<td>NORTHERN ARAPAHO</td>
<td>HORSE RAIDING</td>
<td>Men individually or in small groups</td>
<td>From enemy tribes</td>
<td>To replenish herds as needed</td>
<td>Weapons; horses; ropes or harnesses</td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>HORSE RAIDING</td>
<td>Men individually or in small groups</td>
<td>From enemy camps</td>
<td>To replenish herds as needed</td>
<td>Weapons; horses; ropes or harnesses</td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>HORSE RAIDING</td>
<td>Men individually or in small groups</td>
<td>From enemy tribes</td>
<td>Spent good portion of the year in raiding activities to augment personal herds or to increase status and wealth through acts of bravery and acquisition of horses</td>
<td>Weapons; horses; ropes or harnesses</td>
</tr>
<tr>
<td>SOCIETIES</td>
<td>TASK</td>
<td>SOCIAL UNIT</td>
<td>TASK SETTING</td>
<td>TASK TIMING</td>
<td>TASK MATERIALS</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------</td>
<td>------------------------------------</td>
<td>----------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CROW</td>
<td>CLOTHES MAKING</td>
<td>Women and berdache individually or in small social groups</td>
<td>In lodge or outside in good weather</td>
<td>At night or during winter when more time allowed; repaired clothing as needed</td>
<td>Animal hides; awls; sinew; knives; scrapers; hammer stones; fire for smoking</td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>CLOTHES MAKING</td>
<td>Women</td>
<td>In lodge at night by campfire or outside tipi in daylight</td>
<td>Whenever clothes needed mending or time allowed for the manufacture of new clothing</td>
<td>Animal skins with hair on for subzero temperatures; bison robes; rawhides straps for binding; awls; knives; scrapers and hammer stones for pounding to soften skins; drying racks and fire for smoking hides</td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>CLOTHES MAKING</td>
<td>Women</td>
<td>In lodge or outside tipi weather permitting</td>
<td>Daily or as needed for repair, as time allowed for the manufacture of new clothing</td>
<td>Animal furs; hides with or without the hair; awls; scrapers; knives and hammer stones for working leather</td>
</tr>
<tr>
<td>EASTERN SHOSHONE</td>
<td>CLOTHES MAKING</td>
<td>Women</td>
<td>In the lodge or outside, weather permitting</td>
<td>Daily or as needed for repairs; as time allowed for the manufacture of new clothing</td>
<td>Bison hair woven into a type of wool for blankets; scarves; bags; wallets and women’s girdles; awls; sinew; hides; drying racks; fire for smoking hides; knives; scrapers; sheep wool; wolf and beaver furs</td>
</tr>
<tr>
<td>NORTHERN ARAPAHO</td>
<td>CLOTHES MAKING</td>
<td>Women</td>
<td>In lodge or outside tipi in good weather</td>
<td>Daily for repairs or as time allowed for the manufacture of new clothes</td>
<td>Awl; knives; scrapers; sinew; rawhide</td>
</tr>
<tr>
<td>GROS VENTRE</td>
<td>CLOTHES MAKING</td>
<td>Women</td>
<td>In lodge or outside good weather permitting</td>
<td>Daily for repairs or as time allowed for the manufacture of new clothing</td>
<td>Hides; furs; awls; sinew; hammer stones; knives and scrapers</td>
</tr>
<tr>
<td>SOCIETIES</td>
<td>TASK</td>
<td>SOCIAL UNIT</td>
<td>TASK SETTING</td>
<td>TASK TIMING</td>
<td>TASK MATERIALS</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------</td>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CROW</td>
<td>FOOD PROCESSING AND COOKING</td>
<td>Women and berdache; men on</td>
<td>Meat was traded with village tribes for agricultural products; men cooked on</td>
<td>Daily, men cooked for themselves on hunting trips or war parties as needed</td>
<td>Drying racks; stones for boiling and pouches for cooking; wooden or hide containers; pottery; tools for grinding and processing plant foods with meat products especially for pemmican; storage containers for winter stores of plant foods and dried meats; mauls; scrapers; knives; hearths for cooking in or over; bow drills for fire making until metal after contact</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hunting or raiding parties</td>
<td>hunting trips; in or around cooking hearth inside lodge; may have processed</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>some food outside lodge in a nearby work area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLACKFEET</td>
<td>FOOD PROCESSING AND COOKING</td>
<td>Women individually or in small</td>
<td>In or near cooking hearth located inside the lodge; or in special work areas</td>
<td>Daily; as needed when men were away on excursions; drying meat after communal hunts; production of pemmican in fall for winter season</td>
<td>Bow drills for fire until after contact when metal was used; cooking utensils (knives, spoons, cups etc.); drying racks; hammer stones or mortars and pestles for pounding meats and plant foods for pemmican and storage; stones for boiling with boiling pouches; slabs of stone to prepare foods at the hearth; containers to store foods in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>work groups; men as needed on</td>
<td>for drying or pounding meat for pemmican production</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>hunting trips etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEYENNE</td>
<td>FOOD PROCESSING AND COOKING</td>
<td>Women individually or in small</td>
<td>In or near cooking hearth or in special work/food processing areas near the</td>
<td>Daily; as needed by men; drying of meat and plant foods for winter season in summer after gathering and summer hunt</td>
<td>Mauls, scrapers, knives, utensils (bison horn spoons and bowls) for preparing foods or eating the; rawhide or basket containers to store dried foods; fire drills for fire making until the use of metal later; boiling bags and stones; pottery; bison bladder water bags</td>
</tr>
<tr>
<td></td>
<td></td>
<td>work groups for processing</td>
<td>lodge; at hunting sites by men</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>meat and plant foods; men as</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>needed when away from camp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EASTERN</td>
<td>FOOD PROCESSING AND COOKING</td>
<td>Women individually; men as</td>
<td>In or near cooking hearth; in nearby food processing area for drying meat or</td>
<td>Daily at main camp; as needed by men on hunting or raiding trips; processing of bison meat for winter pemmican production in fall; drying of plant foods in spring and summer when available</td>
<td>Grinding stones; mauls for pounding; knives; scrapers stone slabs near hearth for food preparation; containers to store dried foods; utensils to cook with and eat foods made of bone or antler; pottery; cups and bowls made of bone or wood; basketry</td>
</tr>
<tr>
<td>SHOSHONE</td>
<td></td>
<td>needed when away from camp</td>
<td>plant foods etc.; at hunting camps by men</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NORTHERN</td>
<td>FOOD PROCESSING AND COOKING</td>
<td>Women individually for families</td>
<td>In lodge near or in cooking hearth; food processing areas near lodge</td>
<td>Pounded meats and dried plants for pemmican and storage of edible wild plants in spring and summer for winter season</td>
<td>Grinding stones; knives; scrapers; mauls for pounding foods; utensils made of bone or antler to cook or eat with; containers of rawhide to cook in and store foods for winter; stones for boiling; stones for hearth and flat slab for food preparation</td>
</tr>
<tr>
<td>ARAPAHO</td>
<td></td>
<td>or ritual feasts; men when</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>away from camp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROS</td>
<td>FOOD PROCESSING AND COOKING</td>
<td>Women individually for families</td>
<td>In or near cooking hearth inside lodge; food processing areas near lodge for</td>
<td>Daily or in preparation for winter months; dried fruits mixed with pounded meat to make pemmican after communal hunt; as required for small game</td>
<td>Knives; scrapers; utensils to eat and cook with made of bone or antler; slabs near hearth to prepare foods for cooking or serving; containers to cook in or store foodstuffs for winter season</td>
</tr>
<tr>
<td>VENTRE</td>
<td></td>
<td>men when away from camps</td>
<td>drying and processing plant foods</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
QUALITATIVE DATA:

THE CROW:

According to Denig (1961), the Crow were once a part of the Minnetarees or Gros Ventre or Hidatsa. The split may have occurred over a dispute by two women regarding the portioning of a bison stomach. “From words they came to blows, from blows to knives, in which scuffle one of the women killed the other” (Denig 1961:137). As a result, about half moved onto the Plains. They settled along the headwaters of the Powder River, Wind River, and Big Horn, on the south side of the Yellowstone (Denig 1961).

The Crow, like most Plains groups, lived in conical, skin lodges. These lodges were owned, manufactured and maintained by women. Women also owned their own horses and tack. Travois were used to load and transport all household goods. This task was completed by the woman. On moving day, all dressed in their finest regalia and ornamented their horses as well (Denig 1961).

In hunting, they used bow and arrows rather than guns except in winter when on foot. They did not organize their hunts as other tribes did. They had no Soldiers Lodge to police the hunt. A group could go out and hunt whenever they chose and sometimes the whole camp went out on a surround. This clearly implies that women were an integral part of communal bison hunting practices. In light of the cross-gendered status of both men and women, it would appear that hunting involved all forms of gender in this society. When hunting in this manner, several hundred bison could be killed at once. All the meat
and hides were divided equally with no one person going without. There were no poor amongst the Crow (Denig 1961).

Raiding for horses was a common past time. Each family was known to have from 30 to 60 horses and women were known to have participated in raiding as well as warfare. The frequency of women’s participation in these activities is unknown. Much conflict arose between the Crow and Blackfeet over the ownership of horses. These conflicts happened throughout the year and sometimes on a daily basis. If this information is accurate, it would imply that women and men were constantly engaged in some type of conflict. Often people were killed and revenge exacted. In caring for horses, young men from age 15 to 25 years old would drive the animals about 10 to 12 miles from the camp for pasturing (Denig 1961).

Men and women owned property. When a couple separated, generally the male took charge of all older male children while females and small children went with the female.

Guns, bows, ammunition and all implements of war and the chase belong to the men; while kettles, pans, hides, and other baggage of the like nature fall to the woman’s share. The lodge is hers, and the horses and other property having been divided years before in anticipation of this event, each has no difficulty in selecting their own (Denig 1961:156-156).

Upon dividing bison hides for trade, each receives a share and trades for whatever they like (Denig 1961). This statement implies that women had control over their own production to some extent and benefited directly from their labors.
In terms of warfare, spring and summer were the prime times for this activity. In conflicts with Blackfeet, Sioux or Assiniboine, the Crow usually lost. These tribes often attacked in winter prompting a revenge attack by the Crow in the summer months (Denig 1961).

The Crow berdache is well known in the literature (Callender and Kochems 1983). The male aspect is more commonly written about, but there is at least one case of a famous cross-gendered female, Woman Chief. At ten years old, this female was taken as a captive by the Crow. She was originally with the Gros Ventre. She was eventually adopted into the Crow tribe and her guardian noticed her propensity for male activities. He not only allowed for this social choice, but he also encouraged her male-like pursuits. As a result, she became quite proficient at hunting, horse raiding and war games. She achieved great status and wealth and was accepted as a tribal leader. Her status and wealth allowed her to marry a woman and care for a household similar to any man in her tribe. Just as in this case, male berdache were encouraged and supported in making the choice to live a lifestyle of a female without ridicule or loss of status. He, therefore, learned all the skills usually taught to young girls and would have lived as a woman in all regards (Denig 1961).

Lowie (1963) discusses hunting as a strictly male pursuit at times and then contradicts himself by discussing the cooperative efforts of a bison drive in the dog days. The concept of males as sole owner of the hunting domain is questionable if whole camps participated in surround hunting as described by Denig (1961). The hunting of bison and other game provided the necessities of life such as hides for clothing and lodge covers,
rawhide for containers, horn cups, bowls and spoons. The people hunted game individually or in small groups. In the case of a bison drive, men and women worked cooperatively to guide and stampede bison over cliffs or into corrals.

After the hunt, women dried and prepared meat for pemmican, stowing it away in rawhide cases for future use. They also dressed hides using bone fleshers (metal after contact), and adzes with antler handles. For deerskins, a rib from a large animal was used as a beaming tool. Hides were prepared according to whether they would become leather or rawhide bags. Women usually immersed bison skins in a lye concoction made from ashes and water. The hair was then removed. The hide was stretched across a frame or on the ground, with wooden pegs or stakes pounded into the ground with a maul. This remained for several days with the brains of bison or elk spread on the hide for softening and tanning purposes. Lodge covers, clothes, and containers were made from these processed materials. Fire was used to smoke articles, especially tipi coverings (Lowie 1963).

Weapons manufacture, at least according to Lowie (1963), was a man's task. This concept is again questionable if some women participated in conflict and hunting as in the case of Woman Chief. There is no reason why some women could not have manufactured their own weapons for their own use. There does not seem to be any prohibition preventing women from making these types of tools. Lowie (1963) notes, however, that "the Crow lacked such specifically masculine crafts of primitive people such as metallurgy and wood carving, pottery, basketry and weaving...Nevertheless, men were not without tasks of their own, - above all, they manufactured their own implements
of the chase and warfare” (Lowie 1963:84). This could not be a better example of androcentric analysis of a culture and its division of labor by sex. Lowie was also not accurate in his assessment of the crafts and skills that the Crow had. Today, we know that the Crow did have pottery and basketry. The concept of gender as has been discussed in this thesis, thus far, helps to broaden our understanding of who did what, when, where and how. If women made war, hunted and raided for horses as in the case of Woman Chief and men assumed female roles by being berdache, we cannot simply assume that work was divided according to rigid criteria. There was a great deal of social flexibility and diversity in the Crow people and Lowie’s categorization by strict sex role division of labor does not hold up under this type of scrutiny. It is probably safer to assume that anyone who engaged in certain activities, such as hunting or cooking, whether male or female, may have made their own implements according to their personal preferences. This premise supports Gero’s (1991) assertion that women probably both used and made their own tools. Unfortunately, we do not have the necessary archaeological evidence to fully support this statement.

Regarding the actual implements of the chase, as Lowie (1963) refers to it, bows were made of large horn or prong glued together. It was then carved and painted according to personal style. A glue was made by boiling bison gristle. Sinew was glued together to create the string. Arrows were carried in quivers of otter skin or bison, which were usually embroidered, with quillwork. Other weapons of war included coup sticks, war clubs, shields, and lances (Lowie 1963). Again, Lowie’s assumptions about men and warfare must be questioned in light of cross-gendered information. If women made their
own tools for cooking, foraging etc., and they participated in conflict as well, is it not safe to assume that if they did go to war, they would not rely on someone else making so important a tool. It is one thing to have someone make an expedient tool for butchering and quite another story when your very life depends on the manufacture of a certain item. Trust would probably be a major motivator here in any society engaged in battle and may dictate the manufacture of your own equipment for both men and women.

Frison (1968, 1978), notes that numerous pottery sherds are found in sites throughout northern Wyoming. He believes these sherds found in archaeological sites are compelling evidence of the presence of the Crow people. This pottery is distinctive in both shape and decorative style. Frison (1978), states that although these artifacts are rarely found, they are often found in combination with “Shoshonean” ware indicating the common practice of stealing women.

The Tobacco Growing ceremony is quite important in the Crow culture. It is a renewal ceremony in which both men and women participate. Men are the tobacco planters while women prepare the sacred ground and harvest the plant. Women also prepare the all-important feast. In late April, women clear the ground by digging out about one half acre of land with a bison shoulder bone as a hoe. Once the ground is cleared, the men plant the seeds with great ceremony. The materials needed for this process include seeds, hoes, pipes, drums and beaters, rattles, willows for threshing, wood and fire, pemmican and bowls of food for the feast. The entire camp moves slowly several times away from this site to not give the appearance of abandoning the tobacco. They return at the end of August to harvest the crop (Denig 1961).
THE BLACKFEET:

Oral tradition and religious beliefs of the Blackfeet indicate the balanced worldview of the place of men and women in the world. To create and maintain order in their culture, the Blackfeet believe that: “together old man and old woman designed the people and determined how they should live. Old man insisted that he should have the first say in everything. Old woman agreed, provided she might have the second say” (Ewers 1958:3-4). This has been interpreted as women finally getting it right after the men have had their try at decision making. It is also a sign that women did not acquiesce to the authority of men. Rather, it is only through a Eurocentric and androcentric lens that the message has been distorted (Blackwood 1984).

Essentially, the lifeway of the Blackfeet was much like that of the Crow. There is more evidence in the literature, however, regarding the activities of the cross-gendered “manly-hearted woman” (Lewis 1941). Lewis (1941) reports that “the manly-hearted woman - ‘ninauposkitzipxpe’ - represents a behavior pattern that is in striking contrast to the imputed docility of Plains Indian women and indicates a keen appreciation of personality differences among a simple people” (Lewis 1941:173). Property ownership is one of the main factors in the development and maintenance of manly-hearted traits in women. “Manly-heartedness is manifested in a woman’s interest in and ownership of property, in her behavior in public, in her domestic and sexual life, and in her participation in religious affairs” (Lewis 1941:177). She is, therefore, allowed to and encouraged to raid for horses and participate in warfare to achieve wealth and status.
alongside any man of her tribe. This is a case where gender equality enhanced and maintained gender status (Blackwood 1984).

Although Kehoe (1992) describes the Blackfeet as disdaining fish, Lowie states that in times of need, they secured fish by trapping it in “crude basketry traps” (1982:17). He does not mention this as a technique used by the Crow. Impounding was the favored method for bison hunting with the Crow, Blackfeet and Gros Ventre (Lowie 1982). All Plains tribes practiced wild plant food gathering (Lowie 1982). Most Plains groups used stone boiling as a method for cooking (Lowie 1982). There is some evidence, however, that the Blackfeet also manufactured pottery vessels for cooking and storage (McLaughlin 1970; Ewers 1958; Lowie 1982).

Pemmican was a staple in most Plains societies and was prepared by women (Lowie 1982). The importance of pemmican to Plains societies is discussed in detail by Reeves (1990). Essentially, Reeves believes that it was through the production of pemmican that Plains groups could be more mobile “enabling their culture to become increasingly more elaborated” (Reeves 1990:170). It was because of this food processing innovation created by women, that the florescence of the Northern Plains bison hunting cultures took place (Reeves 1990). Pemmican technology was a woman’s task and is represented in the archaeological record by “rocks fractured during stone boiling, bone boiling pits, extensively smashed selected bones, and bone spill piles” (Reeves 1990:170). According to Reeves, these sites first appear during the early Middle Prehistoric times (2800 B.C.), and become increasingly more evident, particularly after 1000 B.C. (Reeves 1990).
Mauls and grinding stones were used by women to pound and mix meat, berries and fat (Lowie 1982).

As with several other Northwest Plains societies, the use of tobacco for ritual purposes was also important to the Blackfeet. According to Lowie (1982), the Blackfeet along with the Crow and Sarsi all planted and used tobacco.

In terms of dwellings, Lowie (1982) reports that the women in all Plains groups manufactured, transported, built, decorated and were the owners of the lodges. In dog days, tipis were necessarily smaller, but increased in size with the introduction of the horse (Ewers 1955). Lowie (1982) states that the Cheyenne, Arapaho, and Gros Ventre used three poles as the base for holding up other poles, while the Crow, Blackfeet and Shoshone used four poles as a base. Fire hearths were in the interior of the lodge and used for both warmth and cooking. Blackfeet and Crow groups did not use chairs or stools, but reclined on backrests made of willow sticks tied with sinew and hung from a tripod. While these tribes slept on the ground, the Arapaho had a “verifiable” bed (Lowie 1982:32). Aside from ceremonial objects, the lodge housed rawhide containers, wooden dishes, horn spoons, and implements of war (Lowie 1982).

All Plains tribes used a travois for transporting goods either pulled by large dogs bred for such purposes or later with horses. Harnesses of hide were used to engage the animal to the apparatus. Poles and some sort of mesh was used to construct the travois. Although there was variation in style, all Plains groups used this type of tool for transport. Dogs with travois were initially used to relieve the woman’s burden of carrying firewood and water. Lowie states, “a Hidatsa woman declared that women with fifteen or twenty
dogs could bring in enough wood to last the family a month - presumably in the summer” (Lowie 1982:39). Meat was also loaded onto a travois, which again, echoes Reeves assertion that pemmican technology was crucial in contributing to the bison hunting florescence (Reeves 1990).

Clothing was both manufactured and decorated by Plains women. Lowie reports that the Crow costume was fairly typical of Plains clothing. Men’s and women’s clothing usually consisted of “a shirt, leggings reaching to the hip instead of trousers, moccasins, and a buffalo robe. Women wore a long dress of deer or mountain sheep skin extending from the chin to the feet, knee-high leggings, and moccasins” (Lowie 1982:49). Variation in style, of course, occurred among various Plains societies.

Tools in the traditional sense were made of stone, bone, antler, wood and later metal. Counted among the material remains of all Plains groups are chipped stone knives, flakes, chopper tools, mauls, stone arrow abraders, stoneheaded war clubs, projectile points (made of bone, stone, metal, antler or horn from bison or deer, flint etc.), pressure flaking tools, bone awls, bison hoes, digging sticks, bone fleshing tools, adze-shaped antler tools, rawhide containers, pottery vessels, wood-working tools (three dimensional carvings of supernatural beings made by the Arapaho), and stone scrapers for a variety of tasks (Lowie 1982).

There appear to be only slight variations with the Cheyenne, Arapaho, Gros Ventre and Shoshone regarding the above information. The remainder of this section will briefly discuss these tribes
THE CHEYENNE, ARAPAHO, AND GROS VENTRE:

The Cheyenne, Arapaho and Gros Ventre, according to Oliver, are true Plains tribes of farming origin. Like the Crow, they migrated onto the Plains with a farming social organization and economy (Oliver 1962). These three tribes historically have often been allied. Until the eighteenth-century, the Cheyenne lived in earth lodges located in present day Minnesota. They had lifeways much like those of the Mandan and Hidatsa. Along with cultivating maize, beans and squash, the Cheyenne also hunted bison. Due to warfare with their neighboring enemies, the Dakota Sioux and Chippewa or Ojibwa, the Cheyenne migrated to the Plains and became:

*wholly nomadic tipi dwellers, transporting their furnishings and stores on horses as they hunted bison. Women continued to prepare and plant fields of maize and beans in river bottom land on the Plains, particularly along the eastern edge of the Black Hills of South Dakota. Combining long summer hunts with returns to the fields when the crops ripened reduces the scale of farming, necessitating trading trips to Arikara villages on the Missouri River near the North Dakota-South Dakota border to obtain maize (Kehoe 1992:300).*

The Arapaho and Gros Ventre, according to oral traditions, were once a single people. Kehoe (1992) speculates that about the Late Prehistoric Period, the Gros Ventre may have occupied the south-central section of Saskatchewan and the adjacent northwestern portion of North Dakota. They also lived in the Arapaho country to the southwest, in eastern North Dakota and Minnesota, north of Cheyenne territory. The Gros Ventre probably only hunted, while the Arapaho were known to farm and hunt during this period. Historically, both these tribes adapted to equestrian bison hunting and foraging plant foods as their primary subsistence strategy (Kehoe 1992). As previously stated, in terms of dwellings, the Cheyenne lodges were similar to those of the Gros
Ventre and Arapaho, all using three poles, while the Crow, Blackfeet and Shoshone all used four poles (Lowie 1982).

Other aspects of the material cultures of these groups were fairly similar to the Blackfeet and Crow. Lowie (1982) mentions that horn bows are unique to the Shoshone, Crow, Blackfeet and Cheyenne. Plant food gathering was similar to the other Plains groups, although each group had unique seasonal round schedules attached to their particular worldview (Grinnell 1961). All Cheyenne women could weave grass baskets and produce pottery according to Grinnell (1961). He also reports that they helped to drive antelope, butcher bison, dry meat, tan hides, erect tipis and make clothing (Grinnell 1961). The Arapaho were closely associated with the Cheyenne and, therefore, shared many of the same lifeways characteristics reflected in their material culture (Elkin 1940; Eggan 1966).

The Gros Ventre, according to Flannery (1953), were very similar to the Arapaho. They subsisted on the Plains by using a seasonal round strategy employing hunting bison and foraging for plant foods. They had two major communal bison hunts per year. One hunt was in spring and the other in the fall. This was a combined effort of the whole tribe. Bison was hunted in winter, but only sporadically. In April, the bands gathered together for an intensive hunt lasting about one month. After the hunt, bands separated and traveled apart. The hides of bison killed during the spring and summer were used by women “to make parfleshes, moccasin soles, lodge covers, ropes and the like” (Flannery 1953:54). In October, the Gros Ventre began their concentrated fall bison hunt. From October 15 to November 15, the bison produced prime hides for robes. Dried meat was
processed from these hunts and robes were dressed for both use and trade. Lodge covers and furnishings were either repaired or replaced as needed. The tribe then split into bands, again, to find winter shelter along watercourses and in timbered river bottoms. Fur-bearing animals were trapped along with the killing of antelope, elk, and deer during the colder months. Bison was rarely hunted in winter. When hunting bison, however, the surround was the preferred method. Pottery was spoken of in the oral traditions for earlier times, but information is very sketchy (Flannery 1953). Flannery provides the following information from an informant, Coming Daylight:

They used some clay to boil their meat in. My grandmother worked it. She made a pot and told me how she did it. It was made of black mud of some kind. My grandmother took this mud and mixed some kind of grease of tallow with it and shaped the pot. While mixing the clay with the grease, she would shape it. It was smooth then. When finished, it was about 18 inches high and 9 inches in diameter, the same at the top as at the bottom (straight-sided). The bottom was flat because it was put right on the fire and the coals were kind of heaped up around it when cooking with it. When my grandmother finished shaping it, she put it in close to the campfire and turned it around once in awhile so it would dry out. Then, when it was dry, she put water in it and put it on the fire to see whether it would crack (Flannery 1953:65).

In the Gros Ventre society, butchering was considered men’s work. Women occasionally accompanied the hunting party if there were too few men. Women were responsible for processing and cooking the meat (Flannery 1953).

THE EASTERN SHOSHONE:

The Shoshone had a unique beginning. They were the only tribe of the six discussed that came from the Great Basin region. Trenholm estimates they may have moved over the Rockies and onto the Plains as early as A.D. 1500. In Late Prehistoric times, they were well established east of the Rockies. By about A.D. 1700, they possessed the horse.
Like other societies such as the Arapaho, Crow, Cheyenne and Dakota, warfare and horse raiding were constant sources of conflict. In keeping with this concept, continual warfare and horse raiding existed between the Shoshone and the Blackfeet. Like most other Plains groups, they hunted bison and lived off its products. They also enjoyed a variety of wild produce such as roasted pine nuts and juniper berries, sunflower seeds in which to make bread by mixing the seeds with lamb’s quarters and serviceberries, chokecherries dried for winter use, wild strawberries, currants and snowberries when available (Trenholm 1964). For vegetables, they gathered:

- young shoots of firewood, used as asparagus; yamps or wild carrots, eaten raw or cooked;
- cow parsnip, used as rutabaga; thistle taproots, prepared as turnips; and balsam roots, used several ways. Salads of vegetables, fruits, or green as well as wild mint tea, sage, and prairie flax flavoring for meats and vegetables, and licorice rootstalk chewing gum were usually available in season (Trenholm 1964:27).

The Shoshone were also adept at driving small game such as ground hogs, from their holes with sharp barbed sticks. They also snared rabbits by stringing a noose of bark from low-lying trees (Trenholm 1964). In terms of weaponry and warfare, the Shoshone were noted for tipping their arrows with a type of poison. This substance was made by mixing pulverized ants combined with the rotting spleen of a dead animal. Rattlesnake venom was also a favored poison. Otherwise, they used the same types of implements of warfare that other Plains groups used (Trenholm 1964).

Pottery had been found on the Plains and attributed to the Shoshone (Frison 1978). They were also believed to have carved steatite vessels as these have been found in Wyoming archaeological sites (Frison 1978).
QUANTITATIVE DATA ANALYSIS:

With the following data, I now demonstrate the relationships between aspects of social organization, ecology and gender in the societies under study. Table 1 displays data from Bamforth’s (1988) work combined with data provided by Oliver (1962). Bamforth presents data supporting the notion that there is a relationship between ecology and social organization (Figure 1). His data reflects the final locations of certain tribes after 1840 through 1850. He chose this time because it was the most recent period reflecting a “reasonably intact aboriginal way of life” (Bamforth 1988:97). The decision to use this time frame, he explains, is because, “it is reasonable to assume that the data available in the ethnographic record should be most applicable to the more recent periods of the tribes’ histories and should be progressively less accurate farther back in time” (Bamforth 1988:97). His work is reflected here because he believes that:

> even the most powerful historical processes, though, operate in an ecological context. A society's historical background largely controls the way in which that society can exploit a given environment, but the nature of that environment also controls the success of that pattern of exploitation, and human adaptations necessarily integrate historical backgrounds and environmental realities. An adequate understanding of variation in any such adaptations demands attention to variation in both of these factors (Bamforth 1988:3).

Oliver (1962) believes that not all aspects of social organization were lost over time as certain groups moved out onto the Plains. Table 1 reflects Bamforth’s data regarding social organization for the six historic tribes related to number of bands, societies, horse wealth per person, and climatic index indicating resource richness. These data are coupled with Oliver’s notions of cultural origins. This information sets the framework for data interpretation to follow.
Additionally, according to Hayden et al. (1986), although much has been written about hunter-gatherer societies, very few of these studies combine empirical tests with explanations. He states that most studies of hunter-gatherer groups are descriptive and fail to adequately explain observed behavior, particularly as these behaviors relate to women among these groups. In regard to the issue of gender in hunter-gatherer societies, Hayden et al.'s study reports that:

*A cross-cultural materialist approach to the problem of why women’s status is high among some hunter-gatherers and low among others indicates that several factors are strongly related to differences in women’s status. Frequent and severe resource stress is the most strongly associated with low female status... (Hayden et al. 1986:1).*

The following data supports Hayden et al.'s research by demonstrating that there is a correlation between aspects of gender and ecology concerning the groups studied. Specifically, by correlating aspects of climate and gender, these data demonstrate that there is a relationship between the percentages of female activities and female material culture with climatic conditions and higher resource areas regarding the six historic tribes.

Figure 2 shows the percentages of female versus male participation in the designated activities demonstrated by Northwest Plains societies. These percentages were calculated based on the twelve activities noted for each group. If women participated in any of the activities at any time and in any amounts, it was counted as participation. For example, in the Crow society, women were known to have participated in horse raiding, hunting and war making. Even though we do not know how often they did these activities, there is enough evidence in the written record to give women credit for the activity. This line of
thinking was also used in calculating percentages for men’s participation in typically assigned women’s tasks, such as cooking or gathering. From these data, it is reasonable to assume that women would necessarily have used the same types of tools or materials as men in war making or horse raiding with men also using digging sticks for gathering. It is also reasonable to speculate that each gender made their own tools for these activities (Gero 1991). As indicated before, Gero (1991), asserts that women must have used and manufactured their own tools as they made up at least half of the prehistoric population and are probably disproportionately represented in house floor excavations and in central areas of base camps. Gero believes that if this is the archaeological reality, women working in these work areas needed tools to carry out their tasks and it is “inconceivable that they sat and waited for a flake to be produced, or that they set out each time to borrow one” (Gero 1991:169-170). Women, she continues, “clearly required ready access to efficient working edges in their routine work, and they must have manufactured them as needed” (Gero 1991:169-170). Simply stated, women more than likely made and used their own tools according to their needs and preferences. This statement, however, has not adequately been supported by evidence in the archaeological record at this time.

These data show that the Blackfeet and Crow have the highest percentages of female participation in activities overall. This is most likely representative of the larger, more complex and more fluid nature of the social organization of these two groups. In the qualitative descriptions, it is clear that both the Blackfeet and Crow allowed for and, in fact, encouraged the participation of women in almost every facet of their respective cultures in the same manner as men. What is not clear in ethnographic or ethnohistoric
accounts, however, is the relative frequency of participation in activities such as hunting or horse raiding. It is reasonable to assume that more than one or two women went on horse raiding or war making excursions and should be far more representative of the historic and archaeological record than we have evidence of at this time. It is also important to note that the overall percentage of activities for either gender is not that far apart (Blackfeet men=75%, women=100%; Crow men=75%, women 100%). This is indicative of men’s participation in activities normally assigned to women in extant ethnographic accounts. Men clearly cooked for themselves on occasion and helped with foraging activities in order to maximize the amount of food gathered at peak periods.

In the case of the Crow, couples in love often went on foraging trips together. This introduces social relationships as a determining factor in task group assignments. It is also indicative of the flexibility in the division of labor in this society. This type of grouping for the completion of a task also assumes the participation in activities of cross-gendered people of these societies. It stands to reason that cross-gendered people coupled similarly and participated in like manner.

The weakness of this presentation of data is in its typical male/female representation. One of the central goals of this study is to dispel broad generalizations concerning a strict division of labor by sex on the Northwest Plains. Gender, as has been stated many times, is not simply about biology, implying that there are many types of gender not currently understood. The data available on groups such as children, cross-gendered individuals and older people is lacking in the ethnographic accounts. These groups are, therefore, not included in the data resulting in a dialectical representation of male/female task
differentiation. Unfortunately, the written record does not provide enough data to speculate on the frequency of cross-gendered people in specific activities except for the Blackfeet and Crow. This is also true of older people and children. We know that these age groups must have joined in activities for the survival of their society, but there is little information available to support this claim. The other four societies are not well represented in these categories making it impossible at this time to calculate any statistical data regarding age groups or cross-gendered people.

The data representing the other four societies also support the contention that there is a relationship between ecology, social organization and gender. The Cheyenne, for example, as an originally horticultural community had a more complex social structure prior to moving onto the Northwest Plains (Kehoe 1992). In order to carve out a niche for themselves, they adapted to ecological conditions just as other groups had done before and after their arrival. The result was the loss of some social structure, but this in turn resulted in greater group fluidity and resiliency. On the Northwest Plains women and men worked more cooperatively and had fewer rigid lines drawn between them in the assigning of tasks. The Cheyenne did, however, retain some remnants of their earlier horticultural social organization and complexity and were not as fluid as the Blackfeet and Crow in terms of women’s participation in activities such as war making and horse raiding. Ultimately, Cheyenne Plains society exhibits more the typical male/female division of labor and does not include women or cross-gendered people in as many activities as is the case of the Blackfeet and Crow. Whether this means women had less power and authority as a result remains to be seen. What is clear is that Cheyenne women
did not participate in their society with the same amount of freedom as women did in the other two groups.

The Eastern Shoshone is a unique group. Having migrated from the Great Basin over the Rockies and into Wyoming at about 1450 (Kehoe 1992), they left a sometimes harsh and challenging ecological environment and settled in more hospitable areas. While in these areas, the environmental conditions, although more favorable to some extent, did not necessarily contribute to greater social complexity. Table 1 (drawn from Shimkin 1986) indicates only 2 societies and 5 bands for the Eastern Shoshone. These data show the lowest relative ranking for number of extant societies of all groups studied (Table 8). Oliver (1962), however, implies that this is still an increase in complexity of Eastern Shoshone social organization as a result of adaptation to the Northwest Plains nomadic way of life. It is important to note, at this time, how data was gathered for various categories of Table 1. Since Bamforth (1988) did not study the Eastern Shoshone, information was drawn from Shimkin (1986) for calculating number of bands and societies, while averaging data from Bamforth (1988). Specifically, Bamforth did not figure horse wealth per person or climatic indices for this group. He did study societies living in close proximity such as the Comanche and Kiowa. The horse wealth category was determined by horses per person for the Comanche and Kiowa = 2.8. But to err on the conservative side, I only assigned the Eastern Shoshone 2.3 horses per person. This figure resulted in the highest ranking for the Eastern Shoshone as seen in Table 8 and Figure 11. This category may have skewed all other calculations. The climatic index (.65) was determined by averaging the figures used by Bamforth (Figure 1). This figure
depicts the variations in value of the climatic index across the Plains for each society studied. The figures for the area generally inhabited by the Eastern Shoshone resulted in a .65 climatic index as seen in Tables 1 and 6. This score resulted in a ranking of 3 (Table 8) and appears to support these data.

According to Shimkin (1986), Eastern Shoshone women had a paradoxical role. Specifically, they were socially subordinate to men while maintaining the ability to individually achieve status and prestige either through their husbands or through midwifery, gambling or curing. Their social positions were earned and were attributed to the acquisition or non-acquisition of supernatural powers. Even though the Eastern Shoshone thrived, they still maintained a relatively simple social structure according to Lowie (1982). As a result of being one of the first groups on the Northwest Plains to acquire the horse, they managed to become one of the most dominant cultures on the Plains until the rise of the Blackfeet (Ewers 1955). Since horse wealth was not directly determined by Bamforth (1988), approximations were made giving the Eastern Shoshone the number one ranking (Table 8), these data are somewhat suspect. At any rate, the Eastern Shoshone did develop a typical nomadic lifeway on the Plains and become adept bison hunters (Oliver 1962). Lowie (1982) reports, however, that they had a relatively simple social structure with no indication of age-graded societies with leaders only having the ability to persuade not holding any real judicial powers. With all this in mind, the Eastern Shoshone demonstrated fairly high participation of women in their society. Women very clearly participated in the majority of activities versus men (women=83%, men=33%), indicating a wide division of labor between the sexes. There appears to be
more rigidity and specialization in the assigning of tasks, however, when compared to the Blackfeet and Crow societies. Women typically did the household tasks while men went hunting and participated in war parties.

This strict division of labor by sex was also true for the Northern Arapaho, and the Gros Ventre. These societies all had much lower representations of women or cross-gendered groups. This may be due more to the type of written accounts we have to rely on for our qualitative data then representing an accurate picture of their division of labor by sex. Flannery (1953) did an exceptional job of recording the lives of women in the Gros Ventre society and her work tends to support a more rigid and segregated division of labor. From Table 8 it is clear that this group had the lowest ranking overall: 5 for number of extant societies, 4 for material culture, 4 for climatic index, and 6 for horse wealth. From her accounts, it is clear that women were vital to the survival of the Gros Ventre, but they tended to participate in traditionally accepted activities such as gathering of plant foods and cooking, while men went on war parties and raided for horses.

Figure 3 ranks groups according to the degree women were represented in their society’s material culture. For example, in presenting the data, all the tools or material items possibly used in an activity were recorded in the Task Materials column in the Spector Model presented earlier. A tally of all materials that a woman may have used in an activity was calculated for each group. In the case of the Crow, for the hunting category, there were five items listed and women were known to have used all five of them in the participation of hunting. For example, the tools used for communal bison hunting during various time periods, included bow and arrows, mauls for bashing dying
bison, repeating rifles in Historic times, cairns for drive lines and robes for scaring bison. Women, if they hunted like men according to ethnographic accounts of women such as Woman Chief, would necessarily have used these items just as men. Again, the relative frequency of women participating in this type of activity is not well documented and may under report the amount of participation of women in typical male pursuits. By calculating all activities for each group in this manner and tallying the overall percentage, it was possible to rank societies according to which group was weighted toward greater use of material items by women. In other words, according to the data, women clearly participated in more activities overall in the Crow, Blackfeet and Cheyenne societies than in the Northern Arapaho, Eastern Shoshone or the Gros Ventre. Hypothetically, it may be possible, therefore, to determine that the Crow, Blackfeet and Cheyenne should represent women's material culture in the archaeological record to a greater degree than perhaps in the Northern Arapaho, Eastern Shoshone or the Gros Ventre if ethnicity could somehow be determined. This conclusion is supported by data represented in Table 8 in the ranking of material culture by society (Blackfeet = 1, Crow =2, Cheyenne = 3). It is also important to note here that these data seem to support Oliver's belief that those societies arriving onto the Northwest Plains earlier and had more complex societies prior to arriving, maintained some of this complexity while still adapting to new ecological conditions. In the case of the Crow and Blackfeet, this change in social structure seemed to allow for increased social fluidity and greater cultural flexibility allowing for a less rigid division of labor. This in turn supported participation in all aspects of these societies by both men and women to a greater degree.
Hayden et al (1986), Bamforth (1988), Guenther (1987), and Oliver (1962) tried to link concepts of social organization and ecology in explaining the Northwest Plains societies. Bamforth (1988) attempts to demonstrate that optimal climate and the resulting rich resources led to the increased access to bison, which in turn favored greater social complexity. Oliver (1962) attempts to demonstrate that social complexity is determined by a group's origins, history and ecological adaptation. He believes that even though historic groups arrived on the Northwest Plains with a particular social structure, all societies had to adapt to the challenges and rewards of the Plains region. Oliver asserts that all groups migrating to the Northwest Plains necessarily adjusted to the unique ecological conditions and, therefore, to some extent changed their social organization, but only minimally. He is clear that not all aspects of a group's history or organizational structure were lost over time and it is possible to determine where a group migrated from based on the remnants of their social organization seen in historic times. It is his belief that even though changes in social organization are necessary adaptations to a new environment, those changes are “limited by the habit patterns set by old forms” (Oliver 1988:1). Both researchers seem to agree that to some degree, social organization and adaptations to ecological factors essentially led to the characteristics of the six historic groups under study.

Guenther (1987) supports these assertions as they relate to Middle Plains Archaic peoples. He simply states, “when precipitation increases, the vegetation recovers rapidly, followed by an increase in the number of fauna” (1987:9). He goes on to report that groups under these sets of optimal environmental conditions thrive. Guenther's ideas are
especially applicable to this thesis as he correlates gender with ecological conditions. He believes that choice of camp location and the decisions to move camp were more related to women's foraging and food processing needs as previously explained (Guenther 1987).

Additionally, Hayden et al. (1986) concluded that ecological factors were determinants of women's status among hunter-gatherers. Specifically, their study concluded that "high frequency (and probably severity) of RESOURCE STRESS is the major factor which results in low female status" (Hayden et al. 1986:460 emphasis in original). They, however, concede that other explanations are possible and these alternative explanations need not be mutually exclusive. It is entirely possible, and perhaps more likely, that aspects of social organization, gender and ecology act in concert to produce variation in women's status among the six societies discussed.

**INTERPRETATION:**

The following data represent relationships between aspects of gender and elements of social organization and ecology. Specifically, Figures 2 and 3 indicate rankings of the six societies according to percentages of female activities and representation of females in each material culture.

Figure 2 depicts the percentage of female versus male participation in the twelve activities recorded in the Spector Model. The Crow (100%), the Blackfeet (100%) and the Eastern Shoshone (83%) have the highest percentages.

Figure 3 depicts percentages of female representation in material culture. As can be seen in Table 8, the Blackfeet have the highest ranking (1) with the Crow a close second,
followed by the Cheynne. Figure 3 shows the highest percentages for the Blackfeet (100%), the Crow (96.5%) and the Cheyenne (83.3%).

To provide support for assumptions, correlation coefficients were calculated for most of the data. A Pearson r formula was used to determine the degree of relationship between aspects of social organization, ecology and gender. Specifically, the number of extant societies was correlated with percentages of both female activities and female representation in material cultures as seen in Figures 4, 5, 6, 7, 8, 9 and in Tables 2 through 7.

Correlation coefficients for number of extant societies compared to female activities = .45 with material culture and # of societies = .66. The statistical significance level in this case is <.1. These data are represented in Figures 4, 5 and Tables 2, 3.

Regarding horse wealth, correlation coefficients for this category and female activities = .38 with material culture and horse wealth = .16. The statistical significance level for these data is also <.1. These data are represented in Figures 6, 7 and Tables 4, 5.

Neither horse wealth nor number of extant societies show a strong correlation. Although these are low positive correlations and imply weak relationships, the data imply some type of connection.

The highest correlation resulted from the data comparing ecological factors with female activities and material culture. The statistical significance for these data revealed the highest level at >.1 and show the strongest pattern. These data are represented in Figures 8, 9 and Tables 6, 7. The correlation coefficient for female activities correlated
with climatic index = .71 with .71 for material culture and climatic index. These are the highest correlations of the study and indicate the greatest degree of relationship.

Regarding the ranked data, the Spearman rs formula was used to determine degrees of relationships. I calculated correlation coefficients for data in Table 8 and depicted in figures 10, 11, 12. Specifically, the ranking of societies by material culture was compared to number of extant societies (.43), horse wealth (.30) and climatic index (.77). The statistical significance of .77 revealed a level of >.05 and again demonstrated the strongest pattern. .43 and .30 both revealed a level of <.05 and are therefore not statistically significant. Female activity rankings were not correlated with these categories as there was a tie between the Blackfeet and Crow. Since it is more important for the purposes of this thesis to determine gender in material culture, this approach is appropriate. Although these correlation coefficients are not high, with ecology showing the highest relationship (.77) they do show relationships, albeit, somewhat weak. This ranked data also supports earlier assumptions about the top rankings of the Crow, Blackfeet and Cheyenne regarding material culture (Fig. 3). Again, the material cultures of these societies should indicate higher degrees of gendered activity as indicated by material remains possibly observed in the archaeological record.

Overall, it appears that there is a stronger relationship between ecology and aspects of gender than with elements of social organization such as horse wealth or number of extant societies. More work could be conducted to determine if there is support for Oliver’s work in terms of origin and history. Perhaps a Chi Square would reveal a greater relationship between a society and its origins as compared to aspects of gender. This
study does not adequately support this concept, but does indicate that there is some relationship between the complexity of a group and gendered activity with its resulting material cultural remains. The qualitative data is inadequate in terms of defining places of origin and dates of arrival for historic and prehistoric groups and makes the calculations of a Chi Square, at this time, unacceptable. One prime example of this lack of, or sometimes contradictory, information applies to studies of Blackfeet origins. Some authors state that they had strictly hunter/gatherer origins, while others report horticultural beginnings. Oliver (1962), for example, states the possibility of both, but concludes that they were originally horticulturists while having a very long history of hunter/gatherer traditions. Until more is available, any definitive statement regarding this issue is premature.

In conclusion, these data support some relationship between elements of ecology, social organization and aspects of gender regarding the six historic tribes studied. These data and the resulting implications, therefore, support the notion that gender can and should be observed in the archaeological record. If women participated in activities nearly as much or more, than men, their presence in the material remains of prehistoric and historic groups could be observed more readily in the archaeological record with proper methods and better, more focused research designs. It may also be possible to predict the presence of gender (women) in the archaeological record when ecological factors are known. For example, if it is known that a particular area was rich in resources and either prehistoric or historic groups were known to have inhabited this area, then it
could be predicted that higher percentages of female associated artifacts or evidence of their existence at a site could be determined.

This in fact was the case at the Bees Nest site located in North Dakota (Peterson 1997). Lynelle A. Peterson excavated a multi-component site and examined the chipped stone artifact distribution. She was particularly interested in trying to determine if gender could be observed according to tool disposal patterns within stone ring features. Northwest Plains Indian lodges are often located by the presence of stone tipi rings. These features are typically barren of diagnostic artifacts and are, therefore, not generally excavated. The Bees Nest site offered a rich array of artifacts to study and revealed that gender could be determined at this type of site. Peterson speculates that the site was originally chosen because of its access to rich resources for hunting, gathering of plant foods and availability of raw materials for tool manufacture. By studying various aspects of the lithic remains combined with ethnographic information, Peterson was able to infer gender-specific activities based on spatial analysis and tool disposal distributions. This study is a prime example of how ethnographic information can contribute to the increased understanding of the role of gender in both prehistoric and historic time periods. Although it is often difficult to discern gender in the archaeological record, it is possible and necessary for our greater understanding of past cultures.
DISCUSSION:

Because this work was based on a finite body of research material, it is highly recommended that future study depend on a deeper and broader range of resources. It may be particularly informative to research the journals and documents of European trappers and traders to a greater extent than was reflected here. Although these primary sources are considered gender biased and eurocentric to a large extent, perhaps a greater understanding of the daily activities of women on the Plains could still be gleaned from this material. Teasing out important clues as to what men and women did in their daily lives may be seen if a more comprehensive exploration of these sources was undertaken.

Regarding the question of bias, it is important to note the possibility of both researcher and ethnographic bias in this study. In terms of researcher bias, it is possible that gender was seen in the societies because it was the intention to find it. In so doing, certain aspects of male culture may have been overlooked or under-emphasized. It is impossible to keep all our biases out of research, but it is important to acknowledge that they are, in fact, present. Ethnographic bias is highly probable because of the nature of the data collection by early recorders. It is possible that one society may have been over-represented while under-representing another based on the varying quality and availability of ethnographic accounts regarding each society. If this is truly the case, then the data will have to be reworked with new information as it becomes available. This is the benefit of using a scientific model. Since science is self-correcting, we have the opportunities to always revise and update our data and resulting conclusions for a better and more comprehensive understanding of a given topic. Since this is a work in progress
and it is hoped that others will fill in the inevitable blanks, perhaps a more thorough accounting of these Northwest Plains societies can be made at some future date, especially regarding the question of gender. The data at hand, however, support a relationship between the degree of female participation (as evidenced in the material culture presented in the Spector Model), ecological factors and social organization. Ultimately the data indicate a positive correlation between the percentage of female participation in a society and the climatic conditions in which that society lives. If the ecological factors are favorable resulting in a rich resource area, it follows that societies also had a more fluid and complex social structure allowing for the increased participation of women in that society. If ecological conditions were not as favorable, then groups tended to be more rigid in the assigning of tasks along more traditional male/female divisions of labor. These groups displayed a lower degree of social complexity and female participation in society activities. The presence of women in the material cultures of these groups tended to be more differentiated and may be seen more clearly in the archaeological record. Those groups with greater gender flexibility may be more difficult to observe without a greater understanding of social and ecological correlates as seen in this research. It is, therefore, essential to design research questions that will look deeper and explore gender in more specific terms in an effort to understand the role of women in past societies as reflected in the archaeological record.
Figure 1: Variation in the value of the climatic index across the Great Plains
PERCENTAGE OF FEMALE/MALE ACTIVITIES BY SOCIETY

NORTHWEST PLAINS SOCIETIES (Fig. 2)
RANKING OF SOCIETIES BY FEMALE MATERIAL CULTURE

NORTHWEST PLAINS SOCIETIES (Fig. 3)
TABLE 1. Values for Bands, Societies, Horse Wealth, Climatic Index and Origin.

<table>
<thead>
<tr>
<th>Tribe</th>
<th>Bands</th>
<th>Societies</th>
<th>Horses/Person</th>
<th>Climatic Index</th>
<th>Origins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arapaho</td>
<td>4</td>
<td>9</td>
<td>1.4</td>
<td>0.61</td>
<td>Horticulturists?</td>
</tr>
<tr>
<td>Blackfeet</td>
<td>6</td>
<td>14</td>
<td>1.1</td>
<td>1.06</td>
<td>Horticulturists?</td>
</tr>
<tr>
<td>N. Cheyenne</td>
<td>5</td>
<td>7</td>
<td>1.4</td>
<td>0.63</td>
<td>Horticulturists</td>
</tr>
<tr>
<td>Crow</td>
<td>3</td>
<td>9</td>
<td>1.9</td>
<td>0.68</td>
<td>Horticulturists</td>
</tr>
<tr>
<td>Gros Ventre</td>
<td>12</td>
<td>3</td>
<td>0.3</td>
<td>0.65</td>
<td>Horticulturists?</td>
</tr>
<tr>
<td>E. Shoshone</td>
<td>5</td>
<td>2</td>
<td>2.3</td>
<td>0.65</td>
<td>Hunter/Gatherers</td>
</tr>
</tbody>
</table>

?=inconsistencies in the literature regarding origins/these groups may have been hunter/gatherers

TABLE 2. Gender explained by the number of extant societies and percentage of female activity.

<table>
<thead>
<tr>
<th>Number of Societies</th>
<th>Female Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow = 9</td>
<td>100%</td>
</tr>
<tr>
<td>Blackfeet = 14</td>
<td>100%</td>
</tr>
<tr>
<td>N. Cheyenne = 7</td>
<td>75%</td>
</tr>
<tr>
<td>E. Shoshone = 2</td>
<td>83%</td>
</tr>
<tr>
<td>N. Arapaho = 9</td>
<td>58%</td>
</tr>
<tr>
<td>Gros Ventre = 3</td>
<td>66%</td>
</tr>
</tbody>
</table>
TABLE 3. Gender explained by number of extant societies and percentage of females represented in material culture.

<table>
<thead>
<tr>
<th>Number of Societies</th>
<th>Material Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow = 9</td>
<td>96.5%</td>
</tr>
<tr>
<td>Blackfeet = 14</td>
<td>100%</td>
</tr>
<tr>
<td>Cheyenne = 7</td>
<td>83.3%</td>
</tr>
<tr>
<td>E. Shoshone = 2</td>
<td>62.5%</td>
</tr>
<tr>
<td>N. Arapaho = 9</td>
<td>54.7%</td>
</tr>
<tr>
<td>Gros Ventre = 3</td>
<td>64.1%</td>
</tr>
</tbody>
</table>

TABLE 4. Gender explained by horse wealth and percentage of female activities

<table>
<thead>
<tr>
<th>Horses per person</th>
<th>Female Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow = 1.9</td>
<td>100%</td>
</tr>
<tr>
<td>Blackfeet = 1.1</td>
<td>100%</td>
</tr>
<tr>
<td>Cheyenne = 1.4</td>
<td>75%</td>
</tr>
<tr>
<td>E. Shoshone = 2.3</td>
<td>83%</td>
</tr>
<tr>
<td>N. Arapaho = 1.4</td>
<td>58%</td>
</tr>
<tr>
<td>Gros Ventre = .3</td>
<td>66%</td>
</tr>
</tbody>
</table>
TABLE 5. Gender explained by horse wealth and percentage of female representation in material culture.

<table>
<thead>
<tr>
<th>Horses per person</th>
<th>Material Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow = 1.9</td>
<td>96.5%</td>
</tr>
<tr>
<td>Blackfeet = 1.1</td>
<td>100%</td>
</tr>
<tr>
<td>Cheyenne = 1.4</td>
<td>83.3%</td>
</tr>
<tr>
<td>E. Shoshone = 2.3</td>
<td>62.5%</td>
</tr>
<tr>
<td>N. Arapaho = 1.4</td>
<td>54.7%</td>
</tr>
<tr>
<td>Gros Ventre = .3</td>
<td>64.1%</td>
</tr>
</tbody>
</table>

TABLE 6. Gender explained by climatic index and percentage of female activity.

<table>
<thead>
<tr>
<th>Climatic Index</th>
<th>Female Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow = .68</td>
<td>100%</td>
</tr>
<tr>
<td>Blackfeet = 1.06</td>
<td>100%</td>
</tr>
<tr>
<td>Cheyenne = .63</td>
<td>75%</td>
</tr>
<tr>
<td>E. Shoshone = .65</td>
<td>83%</td>
</tr>
<tr>
<td>N. Arapaho = .61</td>
<td>58%</td>
</tr>
<tr>
<td>Gros Ventre = .65</td>
<td>66%</td>
</tr>
</tbody>
</table>
TABLE 7. Gender explained by climatic index and percentage of female representation in material culture.

<table>
<thead>
<tr>
<th>Climatic Index</th>
<th>Material Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow = .68</td>
<td>96.5%</td>
</tr>
<tr>
<td>Blackfeet = 1.06</td>
<td>100%</td>
</tr>
<tr>
<td>Cheyenne = .63</td>
<td>83.3%</td>
</tr>
<tr>
<td>E. Shoshone = .65</td>
<td>62.5%</td>
</tr>
<tr>
<td>N. Arapaho = .61</td>
<td>54.7%</td>
</tr>
<tr>
<td>Gros Ventre = .65</td>
<td>64.1</td>
</tr>
</tbody>
</table>

TABLE 8. Ranked Data

<table>
<thead>
<tr>
<th>Tribe</th>
<th>N</th>
<th># Societies</th>
<th>Material Culture</th>
<th>Climatic Index</th>
<th>Horse Wealth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crow</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Blackfeet</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Cheyenne</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>E. Shoshone</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>N. Arapaho</td>
<td>5</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Gros Ventre</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

Figures 9, 10 and 11 represent this data in scattergrams
Gender Explained by # of Extant Societies

- Crow
- Blackfeet
- Cheyenne
- E. Shoshone
- N. Arapaho
- Gros Ventre

Fig. 4
Gender Explained by # of Extant Societies

Fig. 5
Gender Explained by Horse Wealth

Fig. 6
Gender Explained by Horse Wealth

Fig. 7
Gender Explained by Ecology

Figure 8
Gender Explained by Horse Wealth

Material Culture vs. Horses

Crow, Blackfeet, Cheyenne, E. Shoshone, N. Arapaho, Gros Ventre

Fig. 9
Scattergrams depicting data from Table 8.

- Crow
- Blackfeet
- Cheyenne
- E. Shoshone
- N. Arapaho
- Gros Ventre

Fig. 10
Scattergrams depicting data from Table 8.

Fig. 11
Scattergrams depicting data from Table 8.

- Crow
- Blackfeet
- Cheyenne
- E. Shoshone
- N. Arapaho
- Gros Ventre

Fig. 12
CONCLUSION

It has been stated from the beginning of this project, and throughout, that one of the most challenging problems of studying gender in the archaeological record is a problem of the lack of appropriate and undeveloped methodology. Inadequate theoretical models further hamper valid research regarding this interesting, but difficult topic. Some researchers argue that we must wait until proper and fool-proof method and theory are developed before we study gender in the material cultures of former societies. If we waited for this to occur, we might never conduct gender research at all (Wylie 1991).

By utilizing a cross-cultural ethnographic/ethnohistorical approach, combined with Janet Spector’s Model of Male/Female Task Differentiation, it is believed that a useful tool has been created by virtue of this thesis. It is hoped that future researchers will utilize this resource for quick and easy access to detailed information regarding observation of gender in the Northwest Plains archaeological record. Details of social organization, division of labor and gendered task designation, have been provided at a glance regarding six Historic Plains tribes. This detailed information can be used to extrapolate back in time to determine if cultural patterns remained constant or dramatically changed as reflected by the material remains of Plains societies.

There are a variety of ways to begin incorporating concepts of gender in archaeological research on the Northwestern Plains. We may be able to determine, to a greater degree, gendered work activity areas through spatial analysis of the interior of a tipi ring, for example, as in the case of Lynelle Peterson’s (1997) work. Perhaps we
could begin to set up predictive modeling studies to determine the most likely areas to
evacuate based on our knowledge of gender, ecological conditions and social
organization as these concepts relate to issues of seasonal foraging rounds and choice of
camp site location. Studies such as Guenther (1991) and Hughes (1991) demonstrate the
applicability of these concepts in archaeological research. Even though their studies
were of earlier time periods, it is possible to extrapolate from the Historic period back in
time, for example, by placing greater emphasis on excavating and analyzing evidence of
such items as plant food remains in hearth areas to help determine seasonal round
schedules. In fact, according to Guenther (1991) this technique is highly diagnostic in
70% of hearth studies throughout Wyoming. This is based on the discovery and analysis
of charred remains of Chenopod plants. Ethnographic reports indicate that these plants
were used as cooking containers by wrapping their leaves around foods and placing them
in a hearth to cook. In terms of processing and activity areas, Guenther’s (1991) research
encourages the use of ethnographic reports in determining that women did most of the
work especially in habitation sites. Evidence, therefore, of the contributions of women in
this regard should be observable in the archaeological record. If in fact it is true that
women did most of the work, then many of the activity areas found at a site would result
from gender based tasks (performed primarily by women) as supported by the data
presented in this thesis. In his study at the Horse Creek site, Guenther (1991) determined
that there were at least four major activity areas that focus on hearth features. Two of
these activity areas were determined to be a plant processing area and a chipped stone
tool production area. The plant processing area showed a great deal of fire-cracked rock
and indicated tasks such as parching or boiling which both contribute to large amounts of fire-cracked rock. The chipped stone tool production area showed a crescent shaped pattern indicating that the person doing the task had their back to the hearth. Guenther (1991) concludes that although ethnographic reports indicate tool production was a man’s task, it is highly unlikely that a woman who is butchering meat for food preparation (probably for winter storage) would call upon a man to sharpen her tool. He asserts that it is just as likely that a woman sat in this position to sharpen a tool in the process of food preparation. Both of these activities represent processing of food for storage and winter use. Ultimately, Guenther (1991) reasoned that this was the overall purpose of the Horse Creek site and that the decision to utilize this location was primarily determined based on women’s needs and choices.

If research mainly focused on diagnostic point types, for example, and did not observe gendered tasks as indicated above, we would not be able to understand that although these societies changed, they maintained some aspects of their cultures for a very long time. Even if stone tools changed in style and form, it is highly likely that food processing, storage and cooking techniques remained fairly constant resulting in a more precise indicator of cultural continuity.

Susan Hughes (1991) demonstrates the importance of gender studies in archaeology by relying on Binford’s (1983) study of the Nunamiut. In her study, she was able to designate activity areas according to gender. She found that in regard to women’s activity areas:

*Northern Plains Indian women prepared food, filleted and dried meat for storage extracted marrow and bone grease, and worked hides. Evidence of these types of activities indicate a women’s*
activity area. Stone platforms, kitchen hearths with characteristic butterfly debris distributions, cleared work areas, and worn tools associated with meat cutting, bone scraping, hide work, or sewing might be expected. Resharpening flakes might occur but extensive tool manufacturing debitage will be absent. The bone distribution patterns should document secondary butchering and marrow extraction. Long bone splinters, chips, and larger fragments of bones with little marrow content including foot bones, mandibles, vertebrae, pelvis, and scapula litter the floor. If articular ends were saved for later bone grease extraction, they may be absent. Large concentrations of pulverized cancellous bone indicate bone grease extraction (Hughes 1991:35).

It is highly likely that these types of activities changed very little over time and are better diagnostic tools for determining cultural continuity than projectile points or even hunting strategies. Gendered research is therefore more sensitive to these types of middle range questions. The use of ethnographic comparisons and gender specific studies regarding the archaeological record are more inclusive and garner more holistic conclusions. Gender is an element of social organization that helped to determine subsistence strategies and was crucial in making choices such as deciding campsite location based on seasonal round gathering schedules and bison hunting practices. This decision making was dependent upon both men and women cooperating for the overall survival of the band.

From the ethnographic and ethnohistoric research, we can see that a great deal of the materials used by the six historic tribes, indicate that women should be quite visible in the archaeological record, if we only develop better methods for seeing them. I liken this problem with those of the recent past when archaeologists simply washed artifacts or threw them away because we really did not know what we were looking at. Today, we know better and have developed more comprehensive, accurate methods of detecting clues to understanding the past. Palynology and use-wear methods utilizing electron microscopes, for instance, are only two examples of the advancement in technology and
methodology allowing us to tease out new, and otherwise obscured, data from the old. The data in this research imply that the majority of places archaeologists study, should have a female dominant presence. If archaeologists study house floors inside Plains lodges, for example, they may find evidence of a variety of tasks performed by women. This is also true of the outside areas adjacent to the lodge. Women used the outsides of tipis for a variety of tasks. It is highly recommended that complete excavations be the preferred method used over testing methodologies. Without complete excavation of a site, too much may be lost and reliance on traditional typological methods may prevail. Intensive search and analysis of pollens and fibers, for example could tell us much more about the presence of women than finding a projectile point and determining that it was from a particular phase or horizon. A reinterpretation of typical features such as hearths and fire-cracked rock, as reported by Guenther (19991), will also broaden our understanding of the daily lives of the people in past societies. If women did, indeed, hunt and butcher bison as well as other animals, they may also have a presence at hunting campsites and communal bison hunting butchering sites as indicated by the amount of scrapers found for example.

The majority of material remains, although perishable in most cases, imply that women made their own expedient tools and probably made their own specialized tools also, as argued by Gero (1991). Although we do not have the archaeological evidence to support this claim unequivocally at this time, we do have more knowledge about the participation of women in activities that imply their use and possible manufacture of tools. Women were especially adept at using the natural resources of their environment
and created all the tools necessary for a rich and comfortable life for themselves and their families. They had a keen awareness of the needs of their band and often made crucial decisions about the groups’ welfare. They were astute, brave, competent and creative. Women were an integral part of Northwest Plains society and their presence can be observed in the archaeological record, if we only look in the right places and ask the correct questions.

It is also believed that the second goal of this project has been accomplished as well. The peopling of archaeology on the Plains can only be accomplished when we look at gender in all its aspects. The concept of gender, as it is discussed and understood in the literature, has revealed greater diversity and variation in social relationships between the biological sexes. Men and women appear to have worked in a much more fluid and cooperative manner than implied by most Plains ethnohistorical or ethnographic accounts. There appears to be an easier sharing of duties and responsibilities than the rigid ideal of the division of labor discussed by scholars like Murdock would have us believe, especially in societies like the Crow and Blackfeet. It is probably true that greater social ranking during the later portion of the Historic period led to more stratification and inequality between genders. The debate rages on in the social sciences regarding the loss of status for women during this time, while simultaneously seeing the probable increase of men’s power and prestige. It does appear that the acquisition of the horse and gun combined with influences of the European market economy greatly changed the social structure of many Northwest Plains societies and only deepened the divide between the sexes.
No matter how many technological changes occurred, or ecological challenges faced, people still had to eat. It did not matter whether a woman was feeding a family of three or a band of thirty, she still dug roots with sticks, dried meat on willow branches and prepared pemmican for storage or winter use. Simply stated, since women generally performed most of the daily tasks, it makes sense in attempting to understand past cultures to spend a great deal of time and effort in archaeological research studying what women did for a living and the areas in which they did their work.

In conclusion, it is recommended that this data be used to observe gender in the Northwest Plains archaeological record in an effort to make both men and women more visible. Without this more balanced view of culture, it is very difficult to understand or interpret the past.
BIBLIOGRAPHY

Alexander, Diana

Bamforth, Douglas B.

Binford, Lewis R.

Blackwood, Evelyn

Bonvillain, Nancy

Brown, Judith K.

Bruhns, Karen Olsen

Callender, Charles and Lee M. Kochems
Claassen, Cheryl and Rosemary A. Joyce

Conkey, Margaret W.

Conkey, Margaret W. and Janet D. Spector

Dahlberg, Francis, editor

Denig, Edwin Thompson

Dobres, Marcia-Anne

Duke, Phillip
Eggan, Fred  

Ehrenberg, Margaret  

Elkin, Henry  

Ewers, John C.  
1955 *The Horse in Blackfeet Indian Culture with Comparative Material From Other Western Tribes*. Smithsonian Institution, Bureau of American Ethnology Bulletin 159.


Fagan, Brian M.  

Flannery, Regina  

Frison, George C.  


Gero, Joan  

Gero, Joan and Margaret W. Conkey (editors)

Gould, Richard A.

Grinnell, George Bird
1961  *Pawnee, Blackfeet and Cheyenne: History and Folklore of the Plains From The Writings of George Bird Grinnell*. Charles Schribner’s Sons, New York.

Grobsmith, Elizabeth S.

Guenther, Todd R.

Hayden, Brian


Hayden, Brian; M. Deal; A. Cannon and J. Casey
Holliman, Sandra E.

Hughes, Susan

Kehoe, Alice B.

Kornfeld, Marcel

Kornfeld, Marcel and Julie Francis

Kroeber, A. L.
1939 *Cultural and Natural Areas of Native North America.* University of California Press, Berkeley and Los Angeles.

Lee, Richard B.
1979 *The !Kung San.* Cambridge University, Cambridge.

Lewis, Oscar

Lowie, Robert H.

1982 *Indians of the Plains.* University of Nebraska Press, Lincoln and London.
McLaughlin, R.

Murdock, George Peter

Nelson, Sarah Milledge

Oliver, Symmes C.

Peterson, Lynelle A.

Reeves, Brian O. K.

Sassaman, Kenneth E.

Schlesier, Karl H. (editor)

Shimkin, Demitri B.
Spector, Janet D.


Trenholm, Virginia Cole and Maurine Calley

VanPool, Christie S. and Todd L. VanPool

Weist, Katherine M.

Wedel, Waldo

Wissler, Clark

Wood, Raymond W. And Margot Liberty (editors)

Wylie, Alison