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Navajo women's dress as associated with Navajo history from 1860-1910

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Navajo women's dress as associated with
Navajo history from 1860-1910

by

Cynthia (Tso) Grounds

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE

Major: Textiles and Clothing

Signatures have been redacted for privacy

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Ames, Iowa

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INTRODUCTION

Much has been written on the Navajo and their development. Navajo social organization, religion, economics, and political structure have been studied and documented. The material culture has also been a popular topic for exploration and examination. The woven rugs of Navajo women and the silverwork of the men have received extensive treatment in research. In contrast, the dress of the Navajo has received limited attention. In a review of literature for this research, no focused and systematic studies were found on Navajo clothing. Often dress is only briefly mentioned as part of a discussion of Navajo history or culture (Kluckhohn, Hill, & Kluckhohn, 1971; McNitt, 1962; Underhill, 1953).

Roach and Musa (1980) have identified many factors that are associated with the forms of dress worn within a particular society. These key factors are climate and natural resources, culture contact and trade, technology, socioeconomic and political conditions and events, social structure, aesthetic expression, and art. Roach and Eicher (1979) have indicated that dress is a communicative symbol that serves important functions in human lives. Dress can provide an outlet for creativity and be used to define social, political, economic, and religious roles. Dress can also be used as a form of recreation and to attract the opposite sex. The functions of dress within a society can be identified through a thorough investigation of associations between forms of dress and specific events in the society.

In order to study change in dress over time, a method for systematic documentation is necessary. Wass (1975) and Jasper (1982) have developed

and refined a methodology for analyzing change in dress. Wass's system is based on analyzing dress as a language. The researcher identifies a lexicon of dress items, establishes modes of dress, and proposes combinations of dress items. Jasper's contribution was to apply Wass's method to the study of Ojibwa Indian attire. There have been no studies until now that establish modes of dress or identify combinations of dress items worn by women within the Navajo tribe.

Purpose

The purpose of this study on Navajo women's dress was twofold. The first purpose was to establish modes for Navajo women's dress and to investigate how changes in women's dress were associated with specific events in Navajo history from 1860 to 1910. The second purpose was to propose functions for women's dress in this time period.

The period of 1860 to 1910 was a time of dramatic change in the lives and dress of the Navajo tribe. In 1863, Kit Carson was sent by the United States government to confine the raiding Navajo on the newly acquired southwestern territory. By 1864, the campaign to overcome this nomadic tribe was successful. As a result 8,000 Navajos were forced to walk 300 miles from Fort Defiance, Arizona, where they had surrendered, to internment at Fort Sumner in southeastern New Mexico, known also as Bosque Redondo. To the Navajo this event became known as the "Long Walk" (Underhill, 1953). A treaty was finally signed between the Navajo and the United States in 1868, and the Navajos' request to return to their homeland in Arizona was granted. The treaty also provided for education, health care, and rations of clothing.

The era after Bosque Redondo was a time of adjustment for the tribe. The Navajo returned to small scale horticulture and pastoralism. Navajo women held high status within the matrilineal tribe. The women participated in subsistence activities, owned land and sheep, and maintained the craft of weaving (Shepardson, 1982). Schools were being established by 1890. In the early 1900s, the flow of traders and the establishment of the Santa Fe railroad further contributed to the changing life of the Navajo.

As Navajo women's lives changed, so did their dress. At the beginning of the period under study women were wearing binary dresses of hand woven woolen cloth. The binary dress consisted of two rectangular pieces of wool cloth that had been sewn down both sides and at the shoulders. However, during their confinement at Bosque Redondo, Navajo women were introduced to commercial cloth and later adopted a more Western style dress (Conn, 1974; Underhill, 1953).

Photographs were the primary source for data in this research. Based on responses from selected museums in the southwest, photographs of Navajo women from this period were available in sufficient quantity to establish modes for Navajo women's dress. However, a small number of existing garments were also examined to afford the researcher an opportunity to see and handle the garments of this period to learn about the design, color, and material. Likewise, a small group of elderly Navajo women assisted the researcher in becoming more familiar with the descriptions that have been passed down regarding dress. Finally, museum personnel provided insight on their museum holdings of photographs and garments.

Objectives

The objectives of this research for the time period 1860 to 1910 were:

1. Identify events that contributed to change in the lives of Navajo people. Based on these events define sub-periods for analysis within the 50 years of the study.
2. Develop a lexicon of dress and an instrument for coding photographs using the lexicon.
3. Establish modes for Navajo women's dress, including combinations of dress items.
4. Establish associations between Navajo women's dress and specific events in Navajo history.
5. Based on associations between dress and historic events, propose functions for Navajo women's dress.

Assumptions

The following assumptions were made in this research:

1. Literature pertaining to Navajo history would be available for defining major events from 1860 to 1910.
2. There would be a sufficient number of garments available from 1860 to 1910 to afford the researcher the opportunity to examine dress items in the period.
3. Navajo women and museum personnel with knowledge of this era would be available to interview for supporting information related to the photographs.

Limitations

Limitations of the research were:

1. Visits to museum and photographic archives were restricted to the states of Arizona, New Mexico, and Colorado.
2. Photographs obtained from museums were black and white; therefore, analysis of clothing color was eliminated from the research.
3. Navajo women who had reached maturity during 1860 to 1910 were no longer available for interview. Therefore, supporting interview data were related to Navajo women's dress was based on information that had been passed orally to female relatives and friends by women who had lived during this period.
4. The researcher's inability to speak the Navajo language resulted in engaging the services of an interpreter when conversing with elderly Navajo women. Accordingly, the researcher was dependent on the interpreter to provide details of the conversations.
5. Generalizations are limited to data gathered from the photographs, garments, and interviews in the southwest.

Definitions

Definitions used in this study were:

1. Dress - Any modification of the body including clothing, jewelry, and treatment of the hair (Roach and Musa, 1980).
2. Function of dress - The way that dress serves people as a means of communicating information about the wearer (Jasper, 1982).

3. **Lexicon of dress** - A set of vocabulary words that describes items of dress within a society (Wass, 1975).
4. **Mode of dress** - Items of dress most commonly worn within a particular time period (Jasper, 1982).
5. **Navajo woman's adaptive dress** - An item of dress that was borrowed by Navajo women from another society during the period 1860 to 1910 and was used in a manner that became distinctly Navajo.
6. **Navajo woman's traditional dress** - An item of dress that at the beginning of the 1860s had been worn for successive generations.

REVIEW OF LITERATURE

Three areas of literature were reviewed for this research. First, events in Navajo history were reviewed for the time period of 1860 to 1910. In particular, the researcher watched for discussion of factors that Roach and Musa (1980) have identified to be associated with specific forms of dress worn within a particular society. The factors were climate and natural resources, culture contact and trade, technology, socioeconomic and political conditions and events, social structure, aesthetic expression, and art. Second, the literature on photographers in the southwest during 1860 to 1910 and on using photographers for dating photographs was examined. This review allowed the researcher to become familiar with photographers and a method for dating photographs, the primary source for data in this research. Finally, methods for documenting dress were reviewed. Methods for coding garment style, size, design construction techniques, and photographs depicting dress were included. The purpose for the review of methods was to assist the researcher in developing an instrument for coding and analyzing the dress in photographs of Navajo women.

Events in Navajo History

In order to determine if changes in Navajo women's dress were associated with societal change, an understanding of Navajo historical events from 1860 to 1910 was essential. Changes in Navajo society were documented by study of written materials and through interviews with scholars on Navajo society.

The Navajo prior to Bosque Redondo

The southwest during the 17th century was occupied mainly by Spanish, Pueblo, and Apache peoples who lived in various, sometimes shared, geographical areas. The Spanish and Pueblo Indians lived in permanent settlements, but the Apaches maintained nomadic or semi-nomadic lifestyles. The Spaniards called one distinctive group the Apaches de Navajo, which meant "Apaches of the big fields." Later the name was shortened to "Navajo." The territory of the pastoral, semi-settled Navajo lay northwest of what is now Santa Fe, New Mexico, and their subsistence came from hunting, agriculture, and raiding (Wheat, 1982). During the 17th century, the Navajo expanded their territory into southwest New Mexico and central Arizona.

In 1680, Pueblos led a revolt against the Spanish, but a Spanish retaliation in 1692 resulted in some Pueblo people seeking refuge among the Navajo. Intermarriages became a common occurrence between the two peoples. Along with these intermarriages, elements of Pueblo life were incorporated into the Navajo culture. One of the most significant of these Pueblo elements was weaving. Among the Pueblo tribes, men were the weavers. As the craft of weaving was passed on by Pueblo men to their Navajo wives, women became the weavers among the Navajo (Kahlenberg & Berlant, 1972; Underhill, 1953). The Navajo women were very adept in learning the weaving techniques from the Pueblo. Soon the Navajo women acquired a reputation as excellent weavers. They became known for designs, weavings skills, and creativeness that surpassed their Pueblo teachers (Kahlenberg & Berlant, 1972).

In 1788, the Spaniard, Troncoso, noted that Navajo women had developed a two-piece woman's dress with its dark center and red borders. Troncoso also stated that the women "make the best and finest serapes that are known, blankets, mantas, cotton cloth, coarse cloth, sashes, and other things for their dress and for sales" (Wheat, 1982, p. 3).

During the early 1800s, Navajo women had opportunities to see women from other cultures and tribes. The Navajo often ventured to Santa Fe, New Mexico, for trading purposes, and it was there that Navajo women were able to view Spanish and other white and Indian women and their styles of dress. However, at this time Navajo women did not appear to adopt the forms of dress of these other women (J. Ben Wheat, Curator of Anthropology, University of Colorado Museum, personal communication, Feb. 5, 1984).

The Bent brothers provided further evidence that the Navajo ventured into nearby cities for trade, and that the Navajo had slaves. Two brothers, William and Charles Bent, along with Ceran St. Vrain, established Bent's Fort in 1834 near present day LaJunta, Colorado. The fort was established as a supply base and stopping point for all caravans using the mountain route of the Santa Fe Trail. Charles Bent commented in 1846 that the Navajo "manufacture excellent coarse blankets and coarse woolen goods for wearing apparel. They have in their possession many prisoners, men, women, and children taken from the settlements of this territory whom they held and treat as slaves" (McNitt, 1962, p. 33). William Bent further states that the Navajo often went to Taos, New Mexico, to trade their woven blankets. These blankets found their way to

the Bent, St. Vrain, and Co. store and finally ended up as trade goods valued by the Plains Indians (McNitt, 1962).

Bosque Redondo, 1864 to 1868

In 1860, the territory of New Mexico was opened to the United States for expansion. With the new expansion came a major problem for the government officials; Indian tribal groups, Navajo, Apache, and Pueblo, already occupied some of the lands coveted by white settlers. The Navajo and Apaches were already known for their raiding activities to obtain sheep and goats from Pueblo and Spanish settlements. Brigadier General James T. Carlton was dispatched from Washington, D.C., to bring these troublesome, nomadic, warring tribes under control before peaceful settlement of the territory would be possible. Carlton's idea was to confine the tribes within a government fort, teach them a new way of life, and make them respectable citizens. The plan was approved by the Secretary of the Interior, and Kit Carson was sent to carry out the job of gathering up the Navajo (Underhill, 1953).

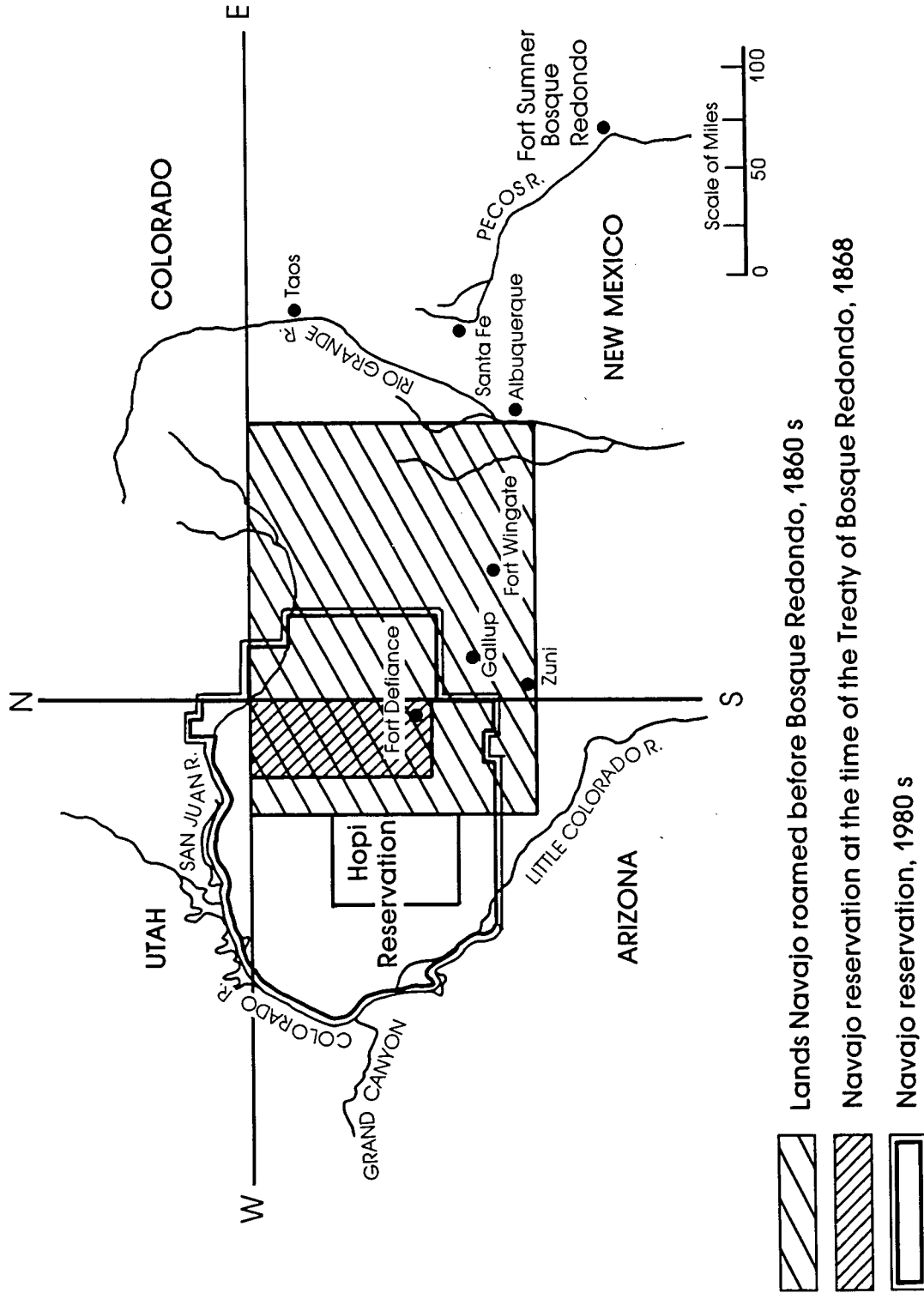
The task was not easy for Carson. Many Navajo opposed confinement. Some fled into the canyons and mountains to hide while others ran to neighboring pueblos for sanctuary (J. Ben Wheat, personal communication, Feb. 5, 1984). To bring the Navajo under control, Carson ordered his troops to destroy the Navajo food sources. United States soldiers burned crops and fruit trees and destroyed sheep in hopes that the starving Navajo would be forced to surrender in due time. The plan succeeded, and one by one, Navajo families and friends were forced to give themselves up at Fort Defiance in order to obtain food and shelter. When several

hundred Navajo surrendered at Fort Defiance, they were summarily sent to Fort Sumner, known to the Navajo as Bosque Redondo. The trip was a 300 mile journey by foot from Fort Defiance in eastern Arizona to Fort Sumner in southeast New Mexico. This resettlement became known as the "Long Walk." By 1864, approximately 8,000 Navajo had survived the journey; however, several hundred had perished from sickness or starvation in route (Jones, 1933). Figure 1 illustrates the southwest area prior to Bosque Redondo, Forts Defiance and Sumner, and the Navajo reservation from 1868 until the 1980s. Forts and towns that were significant to the Navajo during this time are also illustrated.

The conditions at Fort Sumner were far from desirable (Jones, 1933). The soil was like clay and could not be broken by ordinary plows, and the irrigation ditches had to be dug by hand. Crops often failed and corn seemed to be the only produce to survive. Homes were made of cottonwood in a style similar to the Navajo's hogan. When wood was scarce the Navajo would dig holes in the ground for shelter and cover the holes with brush and debris (Kahlenberg & Berlant, 1972).

Navajo food rations consisted of bacon, pork, coffee, and flour. Since these foods were not their usual forms of subsistence the Navajo did not know how to prepare the food. No one showed the Navajo how to prepare the foods. Flour was often cooked right on the ashes and bacon or pork eaten raw. Coffee, in the form of green coffee beans, was boiled until the Navajo realized it had to be roasted and ground first. Many of the Navajo died from food poisoning because of the poorly prepared food. The Navajo were also given fishing poles to fish for food in the nearby Pecos River, but they would not eat fish because it was against their beliefs.

Figure 1. Southwest area prior to Bosque Redondo, Forts Defiance and Sumner, and the Navajo reservation from 1860s until the 1980s.



In spite of these hardships at Bosque Redondo, the Navajo still held their ceremonies and did not give up the hope that someday they would return to their homeland (Jones, 1933).

At Bosque Redondo, rations of calico and muslin cloth were distributed to the Navajo women for making their clothing (McNitt, 1972). The Navajo women were also given sewing thread and needles, items with which the Navajo women were not familiar and which they did not know how to use. The Navajo women cut the cloth rations in the shape of their woven dresses and slit a hole through the top for the head and neck. The dresses were then tied around the waist with a sash belt (Jones, 1933; Underhill, 1953).

There are several written accounts and photographs of officers' wives residing at the many forts present in the west during the 1860s. However, there are differing opinions as to whether there were women, other than Navajo women, at Fort Sumner. Joe Ben Wheat (personal communication, Feb. 5, 1984) stated that there are written accounts in the National Archives indicating there were officers' wives at Fort Sumner. Hosteen Klah reported to Newcomb (1964) that his mother, Slim Woman, worked for the wife of an army lieutenant in 1866 at Bosque Redondo. In contrast, Jones (1933) reported that Navajo informants who were at Bosque Redondo do not recall seeing any officers' wives. Underhill (1956) commented, in reference to Bosque Redondo, that there were "almost no officers wives at the small forts. Even if there had been, a woman who had never used a needle could not learn to make a skirt by merely seeing one swishing by" (p. 137).

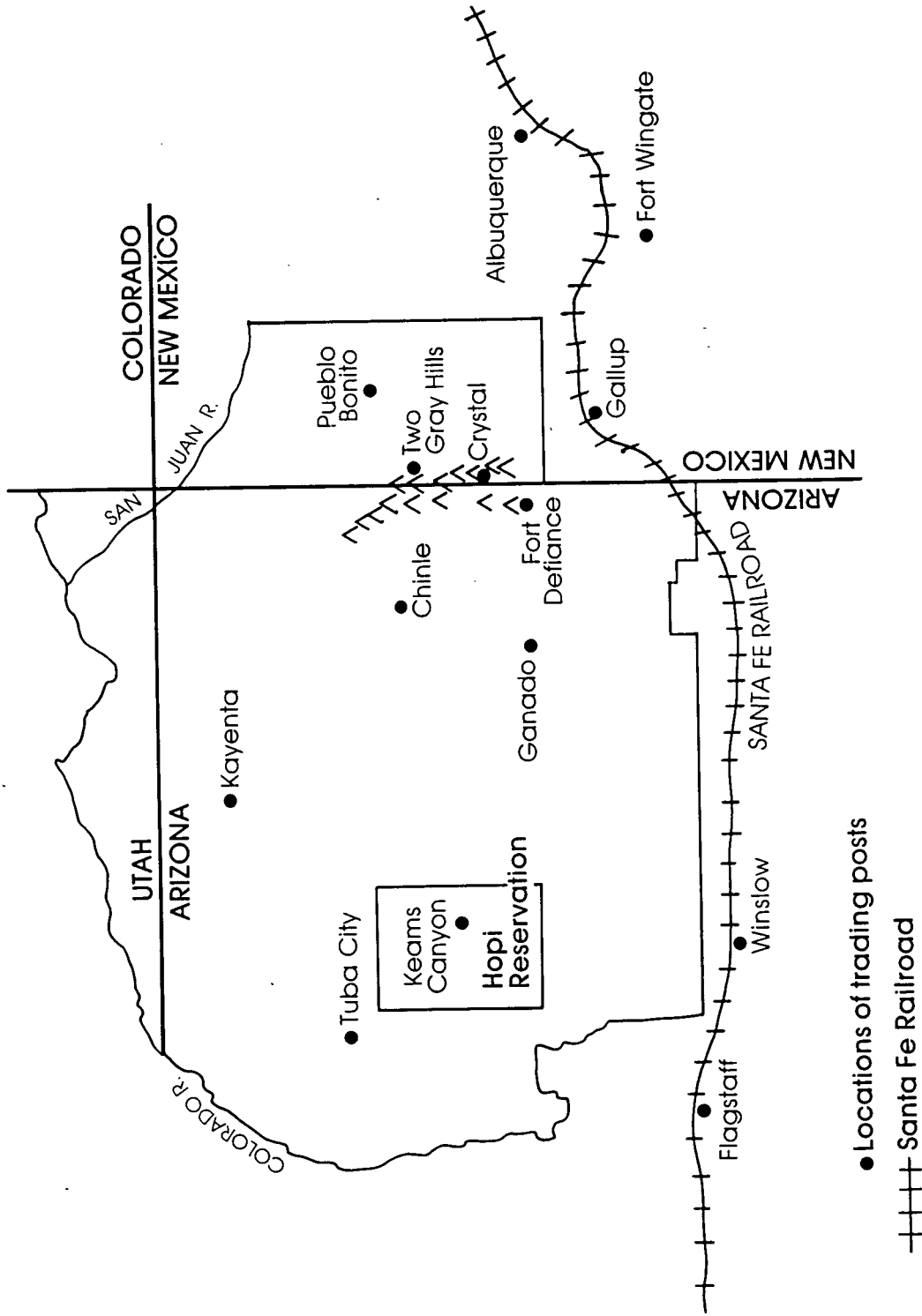
On June 1, 1868, after nearly five years of internment, a treaty was signed between the United States government and the Navajo. The Navajo were permitted to return to a reservation on their homeland in northeastern Arizona. The treaty provided for health care and education, and for rations of material and clothing to be distributed by government agents at Fort Defiance and Fort Wingate. These goods and services were in exchange for the promise from the Navajo not to raid new settlers, Spaniards, or other Indian tribes (P. MacDonald, Navajo Tribal Chairman, Navajo Tribe, personal communication, Sept. 30, 1984). Figure 1 illustrates the land given to the Navajo after signing the treaty in 1868.

In summary, the Navajo internment at Bosque Redondo was a significant event in the lives of the Navajo. In reference to dress, the Navajo were exposed to new dress materials given to them at the fort. However, they retained their traditional clothing style by sewing the new cloth in the style of the traditional woven dress (J. B. Wheat, personal communication, Feb. 5, 1984).

Traders, 1870 to 1890

When the Navajo settled on the reservation after Bosque Redondo, traders became important in the lives of the Navajo. The trading post became a place where the Navajo came in contact with the world outside the reservation (McNitt, 1962). In 1889, Agent C. E. Vandever reported that there were thirty trading posts adjacent to the Navajo reservation as well as nine traders on the reservation itself. Figure 2 illustrates the nine trading posts that existed on the Navajo reservation in 1889 as well as some of those outside the southern reservation boundary. Access to the

Figure 2. Trading posts that existed on and near the Navajo reservation in 1889.



trading posts was difficult and many Navajo had to travel several days to reach the nearest trading post for supplies (Navajo woman informant #1, personal communication, July 25, 1983). Vandever stated that in 1889 "the reservation stores carry on about one-half the trade with the Indians, the balance being transacted by stores beyond the boundary lines and by those on the railroad" (McNitt, 1962, p. 51). Vandever further described the Navajo as in an interesting stage of transition for which traders were responsible. The Navajo began to rely more on commercial goods and less on hand woven cloth, and the traders became the source for these new supplies. The Navajo bargained for hours with the traders who provided them with silver, calico, velveteen, red and black blankets, flour, sugar, coffee, shoes, pants, and vests in exchange for woven blankets.

Adair (1944) viewed the trader as an unusual breed of man. The trader had to be rugged, independent, and able to withstand the long winter months. Lorenzo Hubbell (1930), who was a trader in the second half of the nineteenth century, described the qualities and traits the trader possessed:

Out here in this country the indian trader is everything from merchant to father confessor, justice of the peace, judge, jury, court of appeals, chief medicine man and defacto czar of the domain over which he presides (p. 24).

In order to trade successfully with the Navajo, the trader had to learn the mannerisms, the language, and consumer preferences of the Navajo. Bob Evans, a buyer for the Fred Harvey Company in the early 1900s, described how Navajo men wore their clothing.

When a Navajo buys a pair of pants he does not remove the price tag or other markings. He lets them stay on until they are worn off. When buying cloth to be used for ceremonials, Navajo want it torn, not cut (Berlant & Kahlenberg, 1977, p. 115).

Underhill (1953) stated that the traders did their part to contribute to change in Navajo dress. The Navajo women saw on the traders' shelves the type of cloth that was distributed to them by the government agents on the reservation. The Navajo women knew that this cloth was typical of what the white women wore. As the Navajo women's woven dresses wore out, they could buy calico and soon learned which type of calico was the strongest and smoothest (Underhill, 1953).

The opportunity for Navajo women to view white women and their clothing was also present at the trading post. Traders such as Lorenzo Hubbell of Ganado, Frank Noel of Two Gray Hills, Richard Wetherill of Pueblo Bonito, and J. B. Moore of Crystal were married to white women (McNitt, 1962). No photographs are available to depict traders' wives during this time period; however, it is assumed that the traders' wives dressed in fashions like those worn by women in the eastern part of the United States. The traders' wives may have served as models for imitation of clothing by Navajo women.

In summary, the traders contributed to the adoption of a new form of dress for the Navajo women. They provided the cloth and materials, and very likely the models, which gave the Navajo women more opportunities for change.

Railroad, 1890 to 1910

The arrival of the railroad in 1880 was another event that contributed to change in Navajo life. Trading posts were established along the railroad routes, and goods could now be brought from the east to Navajo country easily and quickly (Berlant & Kahlenberg, 1977). Underhill

(1953) remarked that a regular train service on the southeastern edge of the Navajo reservation from Manuelito to Gallup, New Mexico, brought the first large consignments to the Navajo. The Santa Fe railroad route is noted on Figure 2. Items such as wagons, harnesses, plows, hoes, cookstoves, boots, and overcoats were among the new and unfamiliar items available to the Navajo. With the arrival of the railroad, roads were built for the new wagons and to accommodate the arrival of people traveling or settling along railroad routes. The roads also gave opportunities for the Navajo to travel these routes from the reservation into town. Gambling houses, saloons, and eating places rapidly developed, and homesteaders crowded into the public domain which bordered the Navajo reservation. The railroad also brought employment for the Navajo men. The Navajo earned wages by carrying wood and laying track (Underhill, 1956).

The early part of the 1890s saw a decline in Navajo blankets woven by Navajo women for wearing apparel. The railroad brought in machine made blankets, particularly Pendleton Mills blankets, and these soon replaced woven shoulder blankets worn by Navajo men and women. Navajo women realized that Pendleton blankets were cheaper and that the time, skill, and energy put into weaving blankets could be utilized better by selling their woven blankets to the traders or easterners (Kahlenberg & Berlant, 1972; McNeal, 1984).

McNitt (1962) further discussed the railroad as an economic boon for the Navajo. The railroad brought supplies and people to the West. The Navajo became aware that by selling their jewelry and rugs, they could earn money for goods and clothing. Kahlenberg and Berlant (1972) noted that the closer a Navajo woman lived to a railroad town, the greater the

influence from the outside world. As railroad towns were established all along the southern edge of the reservation, Navajos were likely to interact with Americans and Spaniards.

Underhill (1956) has discussed still another factor to influence Navajo dress, the employment of Navajo women as household servants by Spaniards who lived in railroad towns. Underhill (1956) hypothesized that Navajo women learned to sew because the Spanish ladies could not tolerate the woven dresses of their Navajo women house servants. Therefore, it is likely these Spanish women taught the Navajo women how to sew and insisted that the Navajo women wear the long, full skirts proper for women of the day. Underhill assessed that for the Navajo, servitude was an introduction to the "arts of civilization" (p. 192). Underhill also stated that there were 200 to 300 servants returning to the reservation in the 1870s and 1880s; the majority of these servants were women. When the Navajo servants returned home to the reservation they brought with them the new styles of dress they had been wearing in town. Underhill further commented that the returning Navajo women taught the other women in their families to sew and served as models for what was being worn in the outside world.

In summary, as a result of the establishment of the railroad, the opportunities for the Navajo to find employment and see new people increased. The railroad had a definite impact on the replacement of traditional clothing worn by the Navajo women. The railroad allowed goods to be distributed in ever increasing numbers to the trader or in the settlements along the railroad line. In turn, these goods were made available to Navajo women. In addition, Navajo women, working as

household servants in railroad towns, introduced new styles of dress on their return to the reservation.

Navajo women: Status, activities and dress

Traditionally, Navajo women held strong and influential positions in Navajo society, as they performed important roles in economic and social activities (Spencer & Jennings, 1965). In contrast, most religious ceremonies have been performed by Navajo men and have been rigidly structured. These ceremonies were never supposed to change and were believed to have been effective only when they were performed without mistakes or changes. While religious life is static, Navajo social and economic life is characterized by movement and change, activity and productivity, and women have dominated these areas of Navajo life and culture (Witherspoon, 1977). Navajo clans are matrilineal and the land and sheep traditionally have been owned and inherited by Navajo women (Spencer & Jennings, 1965; Witherspoon, 1977). Lamphere (1974) has assessed that in carrying out their daily activities Navajo women have exercised a great deal of autonomy and control over their lives.

By the early 1860s, the Navajo had become a thrifty and independent tribe with subsistence activities mainly devoted to sheep herding (McNeal, 1984). The years after Bosque Redondo in 1868, were a time of restoring the pastoralism and small scale horticulture or gardening the Navajo once practiced (Shepardson, 1982). Residence was once again in extended family groups. Navajo women owned sheep and practiced all the subsistence skills as well as the tasks associated with weaving.

According to Newcomb's informant, Hosteen Klah, who was a Navajo medicine man and sandpainter, Navajo women, upon their return from Bosque Redondo to the reservation, "still wove their squaw dresses and made chief blankets for the men, but did not sell the blankets" (Newcomb, 1964, p. xxi).

The years immediately following Bosque Redondo were years of poverty and destitution. Underhill (1956, p. 159) reported:

In 1869, Navajo crops were delayed by spring snow and then destroyed by frost. In 1870, there was sleet; 1876, grasshoppers; 1878-79, drought; 1880, wind and rain; 1881, drought. Since Congress was overcome by the expenses of the Civil War, they did not bother to send clothing to the Navajo. The Navajo were wearing the white man's 'cast-off's' and flour sacks that they saved from government issues.

Underhill (1956) noted, "older women now recall that they know no other costume in childhood but a flour sack, split up the sides and with Pillsbury in a circle on the back" (p. 159).

Beginning on November 29, 1869, the Navajo were given sheep by the United States government. The sheep were to be used for food and clothing. The sheep were of inferior quality but they were hardy and could withstand the harsh environment on the reservation (McNeal, 1984).

Underhill (1956) described Navajo women and their sheep in 1870.

Sheep were often the property of Navajo women and the women cared for the sheep like babies. They used the wool for blankets. These blankets were not for home use in this time of poverty, but for trade. While men kept the families alive by hunting and planting, it was the women who produced new wealth. They saved every shred of wool that was not traded for food, even though the churro sheep only gave a pound and a half a clipping. Dressed in flour sacks, living on rats and wild plants the women sat down doggedly to weave not the brilliant, intricate patterns of their great period before Fort Sumner, and not their own handsome blanket dresses in red and black! These wore out gradually and were never replaced (p. 156-157).

By the late 1880s, changes in use of wool occurred when representatives of the United States government and the wool industry decided that the Navajo needed to produce a finer type of wool for the Eastern commercial markets. The wool needed for this eastern market was in direct opposition to the Navajo women's wool needs for blanket and rug weaving (McNeal, 1984). In spite of this new demand, Underhill (1956) reported for the 1890s that "Navajo women owned the sheep and decided how many sheep the family might eat and how many must be saved for the wool clip. And it was the Navajo women who wove the rugs that brought in the income" (p. 187).

From 1880 to 1910, several kinds of female Navajo dress are described in the literature. In April, 1881, John Bourke, a lieutenant in the Army, made his first visit to the Navajo reservation. Bourke (1936) described Navajo women in the Fort Defiance area as still "wearing the two-piece woolen dress with a girdle around the waist" (p. 224). In the Keams Canyon area, Stephen (1893) reported that, "women were wearing the binary dress, although the young women now generally wear a calico dress under this rough tunic" (p. 356). Kluckhohn, Hill, and Kluckhohn (1971) further addressed the topic of Navajo women's dress and stated that "by the late 19th century the binary dress was the most common form of dress worn by Navajo women and continued to be worn after the Navajo men had accepted garments supplied by the whites" (p. 242).

In contrast, a change to calico dresses was reported by other observers. A trader in 1895 related to Amsden (1949), "the style of dress for the Navajo was changing rapidly, and that everyone was 'going calico,' and there were so many native dresses in pawn at his trading store that he

sold them for almost nothing" (p. 97). Finally, in 1910, the Franciscan Fathers reported:

the woven dress was a thing of the past, and that the Navajo woman's "modern costume" consists of long calico skirts, and use the same kind of shirt or tunic as used by the men, though the latter are usually of brighter colors. About the waist is wound a long red sash, or the silver belt . . . On festive occasions or journeys the moccasin is supplemented by the legging-wrap consisting of a buckskin wound in regular folds around the lower leg from the ankle to knee, where it is secured with pieces of buckskin (p. 465-466).

Shepardson's study on the status of Navajo women (1982) addressed the issue of how Navajo women managed to make so rapid an adjustment to the change identified in the historic events from 1860 to 1910. A common generalization in many societies is that men are the innovators and women, the conservators. This generalization does not hold for Navajo women in the second half of the 19th century. Shepardson believes that in order to adopt an innovation, there must be a need that the innovation can meet. Shepardson further noted that there are obstacles to accepting the innovation. These obstacles come in the form of resistance or difficulty in learning new techniques, social restrictions, and cultural traditions. In the end, the innovation must be incorporated into the old way of life. In the case of Navajo women, during the time period 1860 to 1910, they were innovators who brought about change in Navajo life.

Several changes that Navajo women have experienced or brought about can be identified for the time period in study. First, the Navajo women's traditional status in the tribe was restored after Bosque Redondo. Once again Navajo women owned sheep and land, and wove rugs for subsistence or income. Second, during this time the craft of weaving and its function changed from weaving for apparel and home use to weaving for commercial

trade. This change took place despite the inferior quality of sheep. Third, the descriptions of Navajo women's dress in this section indicate changes in both the materials used for clothing and the style of dress.

Time periods for the research

Based on the review of literature pertaining to Navajo historical events, three time periods were distinguished for analysis in this research. The time periods are shown in Table 1. The first period, 1860 to 1870, coincided with the Navajo internment at Bosque Redondo. This was a time when the Navajo were subjected to an unfamiliar way of living and a different culture. Out of necessity, the Navajo had to survive by living according to the rules of the dominant society. By the end of the decade the Navajo had signed a treaty and returned to the reservation. The second period, 1871 to 1890, was a time when the trader was a focal point in Navajo life. The trader served as the contact between the Navajo and the outside world. The trader also provided the Navajo with commercial goods. The third period, 1891 to 1910, covers a time when the railroad was the major connection between the Navajo reservation and the east. Commercial goods were available to the Navajo at a rapid rate and the travelers and settlers arriving with the railroad brought new ideas for the Navajo to imitate.

The three time periods chosen for this research corresponded with factors that Roach and Musa identified as associated with the forms of dress in a society (see Table 1). For the time period 1860-1870, Roach and Musa's factors of socioeconomic and political conditions, culture contact, and social structure are illustrated through the historical

events of Bosque Redondo. Roach and Musa stated that a political condition or event is interdependent with social and economic factors, and it would be difficult to separate the three. Bosque Redondo affected the Navajo women politically, socially, and economically. Politically, Navajo women were forced to adopt a new way of living while at Bosque Redondo and live according to the rules of the United States government. Socially, while at Bosque Redondo, Navajo women did not have control over their lives as in the past. Economically, sheep were not in abundance and Navajo women had to use the cloth and food rationed to them by the officers at Bosque Redondo. Due to the three factors, extensive culture change occurred for Navajo women.

Table 1. Events in Navajo life and Roach and Musa's factors related to dress for the time period 1860 to 1910

	Time Periods		
	1860-1870	1871-1890	1891-1910
Events in Navajo life	Bosque Redondo Settlement on Navajo reservation	Traders	Railroad
Roach and Musa's factors related to dress	- political condition & events - socio- economics - culture contact - social structure	- culture contact - trade - socio- economics - social structure	- technology - culture contact - trade - social structure

For the time period 1871 to 1890, Roach and Musa's factors of culture contact and trade, socioeconomic conditions, and social structure are illustrated through the arrival of traders to the Navajo reservation. Roach and Musa believed that culture contact and trade are potential stimuli for an increase in the variety of materials for forms of dress from which people can choose. Raw materials and actual items of dress available from the trader provided the Navajo women with the opportunity to change their form of dress. Socially, the Navajo women regained their status in Navajo society. Upon return to the reservation, the Navajo women had control over their lives and found a new source of income, weaving for trade. In many ways, Navajo women were able to return to their culture prior to Bosque Redondo.

During the time period of 1891-1910, Roach and Musa's factors of technology, culture contact, trade, and social structure are illustrated. The railroad, a form of technology, brought low-cost textiles and apparel goods at a faster rate to the Navajo women. In relation to culture contact, the people that settled or traveled along the railroad brought new ideas regarding dress from the east to the Navajo women. Socially, the effect of becoming household servants in another society resulted in Navajo women serving as visible models for dress on their return to the reservation.

The Indian and the Photographer

Photography received its start in Paris in 1839. The development of this innovative and fascinating device expanded to the United States in 1840. The early form of photography was the daguerreotype. Silver plated

copper and natural light were used to produce the images on the daguerreotype (Webb & Weinstein, 1973). During the early years of photography a wide variety of people and events were photographed, and with the newly opened frontier, photographing Indians and the land was popular (Webb & Weinstein, 1973).

The earliest photographers to the American southwest were Josiah Gregg who traveled on the Santa Fe Trail, John Plumbe from St. Louis, and Robert H. Vance from northern California. These photographers were all making daguerreotypes of the Indians of the southwest in the 1840s. Unfortunately, only a handful of these images from the 1840s have survived the neglect and mishandling of succeeding generations (Webb & Weinstein, 1973).

Prior to the 1860s, there was limited contact between outsiders and the Indian tribes of the Southern plains and the southwest. Indians were suspicious and apprehensive toward photographers (Webb & Weinstein, 1973). The fact that the photographers could obtain an image by manipulating the sun seemed questionable to the Indian. The photographer's ability to use the sun in making images of a person went against the Indian belief that the sun was a powerful and infinite element and should not be used in catching images of people. The ability to manage the sun's activity for the photographers own use resulted in the name "shadow catchers" being given to the photographers by the Indians (Frink & Barthelmess, 1965).

With the onset of the Civil War in 1861, many of the photographers working in the southwest went east to photograph the Civil War. During the Civil War, treaties between the United States and the Indians continued. The visiting delegations of Indians, including the Navajo,

were photographed in Washington, D.C. The primary photographers who were responsible for these photographs were Matthew Brady, Alexander Gardner, and A. Z. Shindler. In 1869, the west was opened for expansion and the photographers, released from their war time duties, traveled westward (Webb & Weinstein, 1973).

During the 1870s, a large number of historic and ethnographic photographs of Indians was taken (Webb & Weinstein, 1973). Two of the photographers active during the 1870s were John K. Hillers who traveled with the John Wesley Powell Expedition along the Colorado River from 1871 to 1873, and Timothy O'Sullivan, the Civil War photographer who worked with the Wheeler Expedition in 1873. From 1890 to 1903, Ben Wittick of Santa Fe, New Mexico, and in 1901, A. C. Vroman from Pasadena, California, photographed the Navajo and other southwestern tribes.

Using historical information about photographers has been suggested by Gunn (1978) as a means for dating photographs and in turn the garments in the photographs. Gunn developed a chronological list of photographers who worked in Wooster, Ohio from 1850 to 1900. She utilized census materials, business directories, and county records to establish the dates when photographers worked in Wooster, Ohio. Using the list of photographers, Gunn was able to date photographs from known photographers and the costumes depicted in these photographs. For the purposes of this study, Gunn's method was adopted. A chronological list was developed of photographers who worked in the southwest during 1860 to 1910. This list of photographers was used for dating undated photographs that depicted the dress of Navajo women and were taken by known photographers.

Documenting Dress

The purpose for documentation of dress is to describe clothing in a systematic way. Various characteristics have been documented for dress in previous research. Some of these characteristics included design elements and principles, style, construction techniques, color, and dimensions. Sources for documenting dress characteristics can be extant garments and textiles, as well as garments and textiles depicted in photographs and printed sources. The following section includes a discussion of coding systems used with photographs of garments and with extant garments and textiles and of the the dress details coded within the systems.

Coding photographs of garments

Three research studies were reviewed that included methods for documenting garments depicted in photographs. Wass (1975) documented the dress of five generations of a Yoruba family in Lagos, Nigeria. Wass's sources were 607 photographs from a family photographic collection. Wass divided a time span of 75 years into three time periods. The goal of the documentation was to describe typical or modal dress for each time period by developing a lexicon of items of dress, establishing modes, and proposing combinations of dress items. Jasper (1982) utilized Wass's method in describing Ojibwa Indian dress from Minnesota and Wisconsin. Jasper's sources were 352 photographs, paintings, and sketches. Modes of dress were described for seven time periods from 1820 to 1980.

Littrell and Evers (1985) documented the design characteristics of liturgical vestments using photographs of chasubles. The design characteristics included percent of embellishment, number of motifs,

design organization, embellishment techniques, and motif content. The time period encompassed three decades from 1950 to 1970. Littrell and Evers measured change between decades by using standard deviations, a modified Pearson chi-square, means, and frequencies.

Coding extant garments

Four studies utilizing extant garments were reviewed. Huepenbecker (1969) documented 250 Pre-Columbia Peruvian ponchos. Characteristics documented were the size, shape, fabric and garment construction, patterning arrangement, use of ornamentation, and trim. The time span encompassed three periods of Peruvian history. Commonalities in size, measurement, and number of garments were evaluated for each time period. In addition the variations in poncho styles and their functions were assessed across the three time periods.

Cyr (1978) documented Chippewa Indian dress. Cyr's sources totaled 134 extant garments and written descriptions of Chippewa dress from museums and private collections in Michigan. Cyr's time span covered 300 years from 1640 to 1940 and was divided into five periods. Cyr documented types and styles of dress worn on each body position, the sources of material from which items of clothing were made, and the motifs applied to each item of dress. Frequency counts were used to determine changes in Chippewa dress. Haack and Farrell (1980) examined the outer clothing and hair styles worn by men and women living in Iowa towns from 1870 to 1900. Extant clothing was coded on charts and sketches of garments were made. Additional information about dress was obtained from magazines and newspapers. Characteristics documented were fabric and trim, major

dimensions, stylistic features, constructions techniques, and physical condition. While the clothing was described, there was little reference to frequencies for garment characteristics.

Farrell (1981) used similar methods to expand her descriptions of the clothing of adult men and women in Iowa from 1850 to 1899. Descriptions of 215 garments were made by decades and emphasis was placed on describing the cut, fabric and trim, and construction of women's and men's major outerwear.

Coding flat textiles

Two methods for documenting flat textiles were reviewed. Hoskin (1975) examined printed fabrics in one time period. Three hierarchial levels from specific motifs to general motif organization on the ground fabric were documented for the textiles. Cerny (1980) analyzed ten saris of the late 1950s from Nuapatna, India. The art elements and design principles of symmetry, emphasis, rhythm, and proportion were examined. Four hierarchies of design organization ranging from organization of individual motifs to overall organization of motifs on the ground fabric were documented. Hoskin and Cerny focused on describing the design characteristics of the textiles for a single time period as opposed to analyzing change over time.

In conclusion, the purpose for reviewing the documentation of various characteristics of dress and textiles was to allow the researcher insight into the various methods employed for coding photographs and garments. The researcher examined photographs and actual garments in the present research. Because the researcher wanted to define typical or modal dress,

Wass's method for coding dress was used in the research. The researcher drew upon the other studies reviewed for ideas concerning garment details to code.

Hypotheses

Based on the historical events in three time periods of Navajo history and Roach and Musa's factors associated with forms of dress, three hypotheses were developed for this research. For the time period 1860 to 1870, Bosque Redondo and the settlement of the Navajo on the reservation had a major impact on Navajo life. Navajo women had to wear the clothing they brought with them to Bosque Redondo or use the available rations of cloth. There was a scarcity of natural resources in the form of wool at Bosque Redondo. These circumstances led to an awareness of new forms of dress.

1. For the time period of 1860 to 1870, forms of female dress will convey:
 - a) evidence of nearly exclusive use of traditional Navajo attire.
 - b) evidence of some use of new fabrics and non-Navajo forms of dress.

For the time period of 1871 to 1890, traders exposed Navajo women to commercially produced fabrics and new styles of dress. As Navajo women became economically self-sufficient, they had funds to acquire fabrics from the traders.

2. For the time period of 1871 to 1890, forms of female dress will convey:

- a) an adaptive form of dress as an alternative to the traditional form of dress.
- b) use of fabric and commercial goods available from traders as an alternative to traditional handwoven wool fabrics.

For the time period of 1891 to 1910, the railroad further expanded the availability of commercial goods such as new fabrics. Furthermore, Navajo women serving as household servants in railroad towns introduced new styles of dress on their return to the reservation.

3. For the time period of 1891 to 1910, forms of female dress will convey:

- a) evidence of exclusive use of the adaptive form of Navajo attire.
- b) evidence of use of a variety of fabrics and commercial goods brought by the railroad and utilized by Navajo women.

METHOD

The purpose of this study was to establish modes for Navajo women's dress and to investigate how changes in women's dress were associated with specific events in Navajo history from 1860 to 1910. A second purpose was to propose functions for women's dress in this time period. The procedures used in this study are explained in the following order: selection of museums, selection of informants, instruments for data collection, procedures for data collection in the field, and analysis of the data.

Selection of Museums

A list of museums was compiled with the use of the reference, The Official Museum Directory (1982). The selection of museums for the study was based on two criteria: 1) the museum had collections of Navajo photographs and/or garments, and 2) the museum was located in the southwest region of the United States, specifically the states of Arizona, New Mexico, and Colorado.

Using the above criteria, thirteen museums were selected. A letter of inquiry was sent to a curator or director at each museum. The letter stated the purpose of the study and requested information on the museum's collection of photographs and Navajo women's garments (see Appendix A). Each museum was requested to reply with a list of the number of garments and photographs within the time period for the research. Based on the responses, the following museums were selected to be visited for data collection.

Arizona Heritage Center Tucson, Arizona	Museum of New Mexico Santa Fe, New Mexico
Colorado Heritage Center Denver, Colorado	Navajo Tribal Museum Window Rock, Arizona
Denver Art Museum Denver, Colorado	School of American Research Santa Fe, New Mexico
Denver Public Library Denver, Colorado	Arizona State Museum University of Arizona Tucson, Arizona
Heard Museum Phoenix, Arizona	University of Colorado Boulder, Colorado
Hubbell Trading Post Ganado, Arizona	Wheelwright Museum Santa Fe, New Mexico
Maxwell Museum of Anthropology University of New Mexico Albuquerque, New Mexico	

Selection of Informants

Informants were selected to provide additional background for the research. Two types of informants were selected, elderly Navajo women and museum personnel. The purpose for selecting elderly Navajo women was to assist the researcher in becoming more familiar with the descriptions that have been passed down regarding dress. The purpose for selecting museum personnel was to familiarize the researcher with specific historical events in Navajo history.

Navajo women

The intention of gaining descriptive information about what was worn by Navajo women during their internment at Bosque Redondo prompted a selection of elderly Navajo women informants to relate the stories passed down orally from generations ago. Oral tradition plays a significant role

in the daily lives of the Navajo people (Underhill, 1953). Stories of Navajo legends, historic events, and religious beliefs are all a part of oral tradition.

The criteria for selecting female Navajo informants were: 1) informant had the ability to recall something about Navajo women during the time period of the research, 2) informant had a grandmother or great-grandmother at Bosque Redondo, and 3) informant met an age requirement of at least 70 years of age. With the aid of officials at a tribally owned nursing home, three elderly Navajo women were identified and agreed to be interviewed. A fourth woman was interviewed at her home. The ages of the Navajo women ranged from 75 to 101.

Museum personnel

There are few scholars in the area of Navajo historic textiles. Most of these scholars can be located in the southwest where an abundance of Navajo textiles is found. The criteria for the selection of informants were: 1) informant has published articles or books pertaining to Navajo textiles and garments, and 2) informant has knowledge of Navajo history pertaining to the time period for the present study.

The informants selected were affiliated with a museum and included:

Kate Peck Kent, Research Curator
School of American Research
Santa Fe, New Mexico

Marian Rodee, Curator of Collections
Maxwell Museum of Anthropology
University of New Mexico
Albuquerque, New Mexico

Joe Ben Wheat, Curator of Anthropology
University of Colorado Museum
Boulder, Colorado

Instruments for Data Collection

Two types of instruments were developed for collection of data. First, an instrument was developed for data collection from photographs and garments. The instrument was designed to code items of attire and embellishment that were worn by Navajo women during the time period of 1860 to 1910. Second, separate interview schedules were compiled for the elderly Navajo women and the museum curators. The interview schedules were designed to give the researcher additional and supportive information pertaining to Navajo dress and historic events. The interview schedules were approved by the Iowa State University Committee on the Use of Human Subjects in Research (see Appendix B).

Instrument for coding photographs and garments

Three sources were consulted for the development of a coding sheet for photographs and garments (Jasper, 1982; Littrell and Evers, 1985; Wass, 1975). The first step in the development of a coding sheet was the preparation of a lexicon of dress items. A lexicon of dress consists of vocabulary that describes items of dress worn within a society. Copies of ten photographs depicting Navajo women across the time period of the research were provided by the Colorado Heritage Center. These ten photographs served as indicators of attire worn by Navajo women during the time period and were used to develop the lexicon of dress. Items of dress that Navajo women wore in each picture were listed and descriptions were developed for each item. After the lexicon was developed, the items of dress were grouped alphabetically by specific regions of the body. The lexicon of 23 dress items is presented in Table 2.

Table 2. Lexicon of dress items worn by Navajo women, 1860 to 1910

 Items of dress

Arm and hand jewelry and accessories

bracelet - ornament worn around the wrist and made of silver or brass with a stamped design.

ring - a small circular band of metal worn on the finger.^a

Foot and leg coverings

legging - a covering of leather, deerskin, or cloth that is wrapped around the leg below the knee and often attached to a moccasin.^a

moccasin - a heelless slipper made of deerskin or leather, with a soft sole which is brought up the sides of the foot and over the toes where it is gathered in a seam to a U-shaped piece on top of the foot.^a

shoes - covering, usually of leather, for the foot, consisting of stiff or heavy sole and a lighter upper part.^b

stocking - a close fitting foot^b and leg covering, usually knitted of wool, cotton, nylon, or silk.

Head jewelry and accessories

earrings - a metal, white shell, or turquoise ring or other ornament worn in or on the lobe of the ear.

Neck jewelry and accessories

necklace, commercial - an ornament worn around the neck and composed of materials other than white shell, coral, and turquoise.

necklace, Navajo - an ornament worn around the neck and composed of pieces of white shell, coral, and sometimes turquoise.

pendant - a crescent shaped hanging ornament suspended from the neck on a strand of silver beads.

^aSource: Webster's New Twentieth Century Dictionary Unabridged, 2nd ed., 1979.

^bSource: American College Dictionary, 2nd ed., 1951.

Table 2. (Continued)

 Items of dress

Torso accessories

belt, concho - a long narrow rectangular shaped band of leather with silver disks attached; worn around the waist.

brooch - a circular, rectangular, or swastika shaped clasp or ornament having a pin at the back for passing through the clothing and a catch for^b securing the point of a pin; most commonly made of silver.

button, commercial - a knob or flattened piece of non-metal material; attached to garment fabric by sewing thread through holes or a shank on the underside; commonly fitted into a buttonhole^a or slit in a corresponding part of the material as a fastening.

button, silver - a circular knob made of silver metal which is attached to material by means of a shank on the underside, and commonly fitted into a slit in a corresponding part of the material as a fastening.

pin, safety - a wire clasp made for fastening clothing.

sash - a hand woven rectangular shaped band of fabric worn around the waist; approximately 4" wide and 6' long and woven in black, blue, or red yarn with small white design and fringes at each end.

Torso coverings (lower)

skirt - a garment consisting of one to three rectangular pieces sewn into flounces in ascending sizes from top to bottom; hangs from the waist and covers the lower part of the body.^a

Torso coverings (upper)

blouse - a sleeved garment covering the body from the neck and shoulders to the waistline; fitted by means of darts,^c tucks, gathers or shaping; made of plain or printed fabric.

^cSource: Wass (1975).

Table 2. (Continued)

 Items of dress

Torso coverings (complete)

blanket, commercial - a machine woven rectangular woolen cloth used to drape over the shoulders; consisting of fringe bordering all edges. Various geometric motifs are woven in throughout the cloth.

blanket, Navajo - a handwoven rectangle of wool made by Navajo women and used for draping over the shoulders.

dress - garment consisting of a skirt and waist of the same fabric, (either single or two pieces sewn together), shaped to fit some part of the torso.

dress, binary - a loose fitting sewn garment consisting of two rectangular pieces of woven cloth, sewn at the top and sides, leaving an opening for the head and arms. In earlier years the top and bottom of the garment had alternating lines of blue and black. In later years^d, geometric motifs in red, blue, and green bordered the garment.

dress, manta - a form fitting garment consisting of one rectangular piece of handwoven woolen cloth. The garment is wrapped around the body over the right shoulder and under the left arm. The garment is bordered with tassels at each side and no motifs are incorporated.

^dSource: Franciscan Fathers (1910).

The lexicon of dress was used to prepare the coding sheet (see Appendix C). The format of the coding sheet was a checklist that started with items of dress worn on the head and ended with those worn on the feet. On the first sheet, an asterisk was placed by the main torso garments and more detailed information was to be provided about these items on the following sheets. From the photographs, detailed information

was recorded for style, fabric, motif, and ways garments were worn. For extant garments, additional information related to the hand, dimensions, construction, and fiber content was coded. Hand of garments refers to the feel of a fabric, including texture, weight, and drape.

Interview schedule for Navajo women and museum curators

Navajo women The interview schedule for Navajo women was designed to assist the researcher in becoming more familiar with the stories and descriptions of dress that have been passed down from preceding generations. Sources consulted for the content and format of the interview schedule were the historical references presented in the review of literature and two Iowa State University faculty members in the Departments of Sociology and Anthropology and Textiles and Clothing. The schedule was divided into major categories and sub-categories. Major categories were: 1) background of informant, 2) historical events, 3) clothing, 4) adornment and decoration, 5) status, and 6) purchasing clothing and material. The sub-categories emphasized major points in the subject area. Each major category and sub-category was numbered for ease in recording information.

Museum curators The interview schedule for museum curators was developed to obtain the curators' opinions about a) Navajo women's dress from 1860 to 1910, b) historical events influencing dress, and c) reliable written resources for the study of Navajo women's dress. Sources consulted for the development of the interview schedule for Navajo women were also utilized to develop the instrument for museum curators. Examples of the final interview schedules are included in Appendix D.

Procedures for Data Collection in the Field

Museums that responded to the initial letter of inquiry and that appeared to have sufficient garments or photographs in their archives were contacted by letter to arrange appointments to collect data. Museums that did not respond to the initial letter were contacted by telephone and arrangements for research time were made. Data were collected between June 6 and July 27, 1983, and from February 1 through February 5, 1984. A schedule of the time spent at each museum and the number of photographs studied is shown in Table 3.

Data collection with photographs

The procedure followed at each museum was to 1) screen each photograph depicting Navajo women for style of dress typical of the time period in the research, 2) note date of photograph and the photographer, 3) record the items of dress worn by Navajo women on coding instrument, and 4) take pictures of each potential photograph.

Eighty-nine photographs depicting one hundred and twenty-two Navajo women were used in the research. Fifty-seven photographs were studied at museums; thirty-two photographs were published in books and could be examined by the researcher upon return to her university. Of the 89 photographs, 71 were already dated at the outset of the research. Of the remaining 18 undated photographs, two methods of dating photographs were utilized. No undated photograph was initially rejected if the style of dress was typical of the time period. First, if the photographer was known, Gunn's (1978) method of using a chronological list of photographers was applied to date the photographs. The list of photographers was

Table 3. Schedule of time spent and number of photographs and garments studied in each museum

Museum	Time spent	Photographs	Garments
Arizona Heritage Center Tucson, Arizona	1 day	10	-
Colorado Heritage Center Denver, Colorado	1 day	6	-
Denver Art Museum Denver, Colorado	3 days	2	8
Denver Public Library Western History Dept. Denver, Colorado	1 day	9	-
Heard Museum Pheonix, Arizona	2 days	-	12
Hubbell Trading Post Ganado, Arizona	1 day	4	-
Maxwell Museum of Anthropology University of New Mexico Albuquerque, New Mexico	1 day	-	7
Museum of New Mexico Santa Fe, New Mexico	3 days	21	-
Navajo Tribal Museum Window Rock, Arizona	1 day	-	2
School of American Research Santa Fe, New Mexico	3 days	-	12
University of Arizona Arizona State Museum Tucson, Arizona	2 days	4	7
Wheelwright Museum Santa Fe, New Mexico	1 day	1	-

compiled by using the business directory records from the Denver Heritage Center. The list consisted of photographers who were in the southwest during the time period 1860 to 1910. From the list of photographers, undated photographs were dated. Photographers used in dating photographs and the dates they were in the southwest included:

J. Meem, 1863-1868
 T. E. O'Sullivan, 1871, 1873-74, Wheeler Expedition
 Ben Wittick, 1879-1903
 Christian Barthelmess, 1883-1894
 Frank Gonner, 1891-1901
 Gonner and Hurd, 1892
 Buckwalter, 1897-1901
 E. O. Richmond, 1899, Durango, Colorado
 Charles Goodman, 1901, Bluff, Utah
 C. C. Pierre, 1901, L.A.
 J. Hoyt, 1905-1910
 H. H. Tammen, 1909

Second, in some cases undated photographs that were collected in the field were later found to be dated in texts. Texts used as resources for dating photographs were: 1) Pictorial history of the Navajo from 1860 to 1910 by Robert Roessel (1980), 2) Photographer on an Army mule by Frink and Barthelmess (1965), and 3) Dwellers at the source: Southwestern Indian photographs of A. C. Vroman, 1895-1904 by Webb and Weinstein (1973). Thirteen photographs were dated by using the photographer as a means of dating the photographs. Five photographers were dated by utilizing books containing photographs depicting Navajo women.

Data collection with garments

Forty-eight extant garments were studied at various museums in the southwest. The garments provided supportive information to the research on Navajo women's dress. The procedure followed at each museum was to note from the accession records if the garment was in the time period of

the research. Screening of the garments for reproductions was made based on information provided by the museum on the style and fiber content of the garment. Reproductions of garments were not included in the research. Coding of the garments using the coding instrument and photographing of the garments were the final steps in the procedure.

Procedures for interviewing informants

Navajo women Arrangements to interview three elderly Navajo women were made through a tribally owned nursing home at Chinle in northeast Arizona. Time was arranged with the director of the nursing home to interview the Navajo women in a group session. Although the women were present in a group, each was interviewed individually. Compensation in the form of a bag of fruit was given to each Navajo woman who participated in the interview. A fourth elderly Navajo woman in the Chinle area was interviewed at her private home. Due to the inability of the researcher to speak the Navajo language, the services of an interpreter were needed to conduct the interviews with the Navajo women. An employee at the nursing home also aided the researcher in interpreting the language.

The ordering of questions for each informant started with informing the Navajo woman of her right of consent for the researcher to interview her. Background information was asked pertaining to when the informant grew up, her clan, number of children and grandchildren, and finally her age. The informant was then asked to relate the stories passed down to her about Bosque Redondo and the way the Navajo women dressed during that time. If she could not recall any stories, the informant was asked to describe how Navajo women dressed when the informant was young. Answers

from each informant were recorded as the interview progressed. The average time for each interview was forty-five minutes. Tape recording of the interview was prohibited by the nursing home and by the elderly Navajo woman interviewed privately at her home.

Museum curators Three museum curators were selected for interviews to obtain additional information on Navajo women's clothing. Two of the museum curators were not available for interviews at the time of the fieldwork; therefore, interview schedules were sent to them. Replies were received within ten days. The third curator was available for interviewing and arrangements were made for a mutual time to have the interview.

The ordering of questions for the informant started with notification of the informant's right of consent. Questions pertaining to Navajo women's dress during the specified time period and information on reliable resources for Navajo women's dress were asked. The length of the interview was one hour and permission for taping the interview was given.

Analysis of Data

Analysis of photographs

The method for analysis of photographs of Navajo women's dress was modeled after Wass's methods (1975) for analyzing dress as a language. With Wass's method, a researcher first identifies all clothing items that are visibly apparent in the photographs and prepares a lexicon of dress based on the photographs. Second, modes of dress are derived by identifying items of clothing shown most frequently in the photographs.

Lexicon of items of dress The lexicon of dress for Navajo women was developed as described earlier and is shown in Table 2. Following development of the lexicon of dress a distinction had to be made between Western and non-Western items of dress. By the 20th century, few areas in the world remained untouched by the Western culture or dress. However, Roach and Musa (1980) believed that contact with Western culture does not necessarily result in full adoption of a Western form of dress, even if the indigenous dress is changed. A culture can be influenced but not necessarily converted, and in many instances, through the inter-mixing of Western and non-Western elements, the dress retains a characteristic non-Western flavor. Roach and Musa concluded that even in cases where the main components of the dress are Western this does not mean that the culture participates in the Western fashion system; its participation can be minimal or non-existent. For the present research, definitions were developed to describe traditional and adaptive forms of dress. Navajo women's clothing that did not have specific elements of Western dress was categorized as traditional dress. Conversely, the adaptive form of dress in Navajo women's clothing included specific elements of Western dress.

Modes of Navajo women's dress To determine the modes of dress for Navajo women within each of the time periods, 1860-1870, 1871-1890, and 1891-1910, the following steps were carried out:

1. The items of dress worn by Navajo women in the photographs were divided into two categories for each of the time periods. These categories were labeled traditional (Navajo) and adaptive (Navajo). Major garments depicting traditional dress were the

binary dress, Navajo necklace, leggings, and moccasins. Major garments depicting the adaptive form of dress were the skirt, blouse, and sash belt.

2. Frequencies of use for all items of dress for the two categories within the three time periods were established. The total number of items per person was also recorded.
3. The average number of garments worn for the two categories within each time period was determined. The averages were obtained by taking the total number of garments for all persons and dividing that number by the number of persons in the time period. This resulted in five averages as the first time period had only the traditional form of dress. These averages were used to establish limits to the number of items included in the modes of Navajo women's dress for the three time periods. For example, for the traditional clothing in the time period 1860-1870, the average number of garments worn by a Navajo woman was 4.27.
4. Based on the five averages determined for the three time periods, selection of the modal items of dress was made. Modal garments were those items of dress which appeared with greatest frequency in the photographs. For example, the traditional dress in the time period of 1860-1870 consisted of an average of four dress items. The four most frequently occurring items were the binary dress, Navajo necklace, leggings, and moccasins.

Analysis of garments

Extant garments were documented for additional and supportive information to the data collected from photographs. Frequencies were established for motif, color, fiber content, and tactile hand of the garments.

Analysis of interviews

The information obtained from interviews with Navajo women and museum curators was tabulated and summarized for the appropriate time period. By analyzing the information collected by museum personnel and elderly Navajo women, the researcher was able to provide supportive documentation as to what was worn by Navajo women during the time period 1860 to 1910.

RESULTS AND DISCUSSION

The research findings are presented and discussed in two major sections. The first section includes a description of the modes of dress. Supporting information from interviews and extant garments is also included. The second section includes presentation and discussion of the hypothesis for each of the three time periods. The hypotheses on Navajo women's dress are discussed in relation to events in Navajo history from 1860 to 1910.

Modes of Dress

Development of modes

The modes of Navajo women's dress were developed in the following manner. Frequencies for 23 dress items were tabulated for the time periods of 1860 to 1870, 1871 to 1890, and 1891 to 1910. As women were coded they were placed in the traditional or adaptive category for the time period. A woman was coded in the traditional category if the garment she wore was a binary dress or manta. On the other hand, if a Navajo woman wore a blouse and skirt she was coded in the adaptive category for that time period. A list of the dress items and their frequencies in each of the three time periods is shown in Table 4.

For each time period the average number of garments worn together was also calculated for the categories of traditional and adaptive forms of dress. These averages served as a basis for determining the number of items to be included in the modes for the traditional and adaptive forms of dress within each time period (see Table 5). Averages of .5 or higher

Table 4. Frequency of Navajo female garments

Garment	Time period			Total period (N=122)
	1859-1870 (n=11)	1871-1890 (n=40)	1891-1910 (n=71)	
Belt, concho	0	6	24	30
Blanket, commercial	0	6	33	39
Blanket, Navajo	2	10	6	18
Blouse	0	22	69	91
Bracelet	3	13	32	48
Brooch	0	0	3	3
Button, commercial	0	1	5	6
Button, silver	0	1	10	11
Dress	0	1	0	1
Dress, binary	11	17	4	32
Dress, manta	0	1	0	2
Earrings	2	2	5	9
Leggings	6	21	20	47
Moccasins	6	22	36	64
Necklace, commercial	0	3	0	3
Necklace, Navajo	11	24	51	86
Pendant	0	10	14	24
Pin, safety	0	0	1	1
Ring	0	6	15	21
Sash	5	22	24	51
Shoes	0	1	1	1
Skirt	0	21	67	88
Stockings	0	0	1	1

Table 5. Average number of garments worn by time periods and cultural association

Time period	Cultural Association			
	Traditional Average	Women (n)	Adaptive Average	Women (n)
1860-1870	4.27	(11)	-	
1871-1890	5.00	(18)	5.50	(22)
1891-1910	4.25	(4)	5.95	(67)

were rounded to the next higher whole number; averages of .4 or lower were rounded to the lower whole number.

Mode of dress: 1860 to 1870

Information from photographs The number of Navajo women depicted in photographs in the time period 1860 to 1870 totaled 11. The photographs of the Navajo women appeared to present women from adolescence to young adulthood. One Navajo woman seemed to be much older than the others. Women were depicted alone, in pairs, and in groups. Each photograph was posed in front of a studio backdrop. No evidence of the surroundings at Bosque Redondo was depicted in these photographs.

This time period had only the traditional mode of dress. Eight different dress items were worn by Navajo women. The average number of dress items worn per woman was four (see Table 6). The traditional mode of dress included the binary dress and Navajo necklace worn by the eleven Navajo women. Leggings and moccasins were the remaining modal items worn by six of the Navajo women. The legs of five women were not visible due to the pose of the women in the photographs. For non-modal items, jewelry, other than the necklace, was depicted infrequently. The bracelet was worn by three women, and two other women wore earrings. The Navajo blanket, draped over the shoulders, was worn by two women.

Information from garments Supportive information for the time period 1860 to 1870 came from extant garments that were examined. Of the 48 extant garments used in this research, 21 of these garments were dated during the time period 1860 to 1870. All garments in this time period

Table 6. Navajo female modes of dress by time periods and cultural association

A. 1859-1870					
Number of subjects in photographs = 11					
Modal dress items	Traditional				
	Number ^a	(Percent)			
Dress, binary	11	(100)			
Necklace, Navajo	11	(100)			
Leggings	6	(55)			
Moccasins	6	(55)			
B. 1871-1890					
Number of subjects in photographs = 40					
Modal dress items	Traditional		Modal dress items	Adaptive	
	Number ^a	(Percent)		Number ^a	(Percent)
Dress, binary	17	(43)	Blouse	21	(53)
Necklace, Navajo	13	(33)	Skirt	21	(53)
Sash	12	(30)	Necklace, Navajo	11	(28)
Leggings	11	(28)	Moccasins	11	(28)
Moccasins	11	(28)	Leggings	10	(25)
			Sash	9	(23)
C. 1891-1910					
Number of subjects in photographs = 71					
Modal dress items	Traditional		Modal dress items	Adaptive	
	Number ^a	(Percent)		Number ^a	(Percent)
Dress, binary	4	(6)	Blouse	67	(94)
Necklace, Navajo	2	(3)	Skirt	67	(94)
Blanket, Navajo	2	(3)	Necklace, Navajo	49	(69)
Bracelets	2	(3)	Moccasins	36	(51)
			Blanket, commercial	33	(46)
			Bracelets	30	(42)

^aThe sum does not equal the number of subjects because individuals who wear modal items do not necessarily wear each item in the modal composition.

were in the category of traditional dress. Seventeen garments were binary dresses and four garments were mantas.

The following characteristics were noted for the motifs, colors, fiber content, dimensions, and hand of the garments.

1. The majority of the garments had geometric or cross motifs in their borders. There was exclusive use of geometric motifs on fifteen garments. Three garments had multiple striped borders with no other motifs. To the researcher, the visual impression was that the borders covered up to one-third of the garment. Similarly, for the garments depicted in photographs, the borders appeared to cover up to one-third of the garment. However, the garments in the photographs all had horizontal, multiple striped borders.
2. All garments had a black and brown center; all but one had a red border at the top and the bottom. Seventeen garments had blue motifs in the borders. Four of these garments also contained green motifs. There were variations in the percentage of space occupied by each color. The red borders on some dresses made up a large portion of the dress while other borders were small. In either case, the borders were always distinct lines separating the border from the center. There were portions of black mixed with brown in specific areas of the center. To the researcher, the visual impression was a garment with strongly contrasting colors of black, brown, red, and blue. The red and blue borders were wide and seemed to visually enlarge the garment's appearance.

3. For all garments, the fiber content was wool. The fabrics were handwoven and handsewn into garments.
4. The averages and ranges of dimensions for the garments were:

	<u>Average length</u>	<u>Range</u>
Binary dress	124.3 cm.	113.0-137.5 cm.
Manta	119.3 cm.	99.4-134.6 cm.
	<u>Average width</u>	<u>Range</u>
Binary dress	81.4 cm.	75.2- 87.0 cm.
Manta	121.7 cm.	34.5- 81.3 cm.

A possible reason for variation in dimensions may have been due to the size of the wearer. From the photographs, there appeared to be little difference in the way the dresses were worn. All were worn loosely on the body. Due to similarity of fit, and assuming that women varied in physical dimensions, it is proposed that mantas and binary dresses were woven to the general physical dimensions of the wearer.

5. The hand of nine garments was soft, thin, and smooth. Twelve garments, in contrast, were coarse, rough, and very thick.

Information from interviews The four elderly Navajo women stated they did not wear the traditional form of dress when they were young. The oldest woman was born in 1884. Informant #3, age 101, stated that the binary dress was worn by her grandmother. This would indicate that Informant #3's grandmother would have been wearing the binary dress in the time period 1860 to 1870.

Summary and discussion In the 1860s, there was great commonality in the dress of Navajo women. The women wore a limited number of garments

and little jewelry beyond the Navajo necklace. All women wore their dresses loosely fit to the body. Figures 3 and 4 show modal items of dress for 1860 to 1870. Figure 3 depicts two Navajo girls wearing modal items of the binary dress, necklace, leggings, and moccasins. Earrings, a non-modal item, are also worn. Figure 4 shows a Navajo girl wearing the modal items along with bracelets and a Navajo blanket.

A number of physical characteristics were noted in examination of extant garments. The black and brown centers bordered by red on the binary dresses and mantas conveyed a strongly contrasting visual effect. The commonly used geometric and cross motifs were less visually prominent on the extant garments than in the photographs. Perhaps the more visually elaborate garments in the photographs were brought to Bosque Redondo and worn for the duration of the internment. The tactile effects of the handwoven and hand constructed garments were in some cases soft and in other cases coarse and heavy. A soft hand may be evidence of a finely woven garment brought to Bosque Redondo or may have resulted from heavy wear during internment. Living conditions at Bosque Redondo were difficult, and women were performing many new tasks in their daily lives. Garments with a harsh hand and less elaboration may have resulted from the limited time for fine weaving. In addition, the coarser, thicker fabrics were closer to those fabrics evolving in the new craft of rug weaving.

Modes of dress: 1871 to 1890

Information from photographs The number of Navajo women depicted in photographs in the time period 1871 to 1890 totaled 40. The photographs of the Navajo women appeared to present women who were very

Figure 3. Two Navajo girls wearing modal items of the traditional category of dress, 1860-1870.
Photograph courtesy of Museum of New Mexico, #38208.



Figure 4. Navajo girl wearing modal items of the traditional category of dress, 1860-1870.
Photograph courtesy of Museum of New Mexico, #38196.



young up to those who were elderly. The settings of the photographs were commonly studio backgrounds with a woman depicted alone or with one other person. An exception was that 11 women were depicted in outside settings. Twenty different dress items were worn by Navajo women. There were two modes for the time period, one for the traditional category of dress and the second for the adaptive category of dress. The distribution of the women in the two modes was nearly even with 18 women in the traditional mode and 22 women in the adaptation mode.

Traditional mode: 1871 to 1890 The 18 women depicted in photographs for the traditional mode ranged in age from adolescence to the elderly. The average number of dress items per woman was five (see Table 6). The traditional mode of dress consisted of the binary dress worn by 17 women; the Navajo necklace worn by 13 women; the sash worn by 12 women, and moccasins and leggings, each worn by 11 women. As compared to the previous period, there was a decrease in the percentage of Navajo women wearing the necklace; however, there was an increase in the number of non-modal jewelry items. Items worn at the waist were becoming more common. The sash increased in use, and the concho belt was added by three women. Two items that were not present in the previous time period were a blouse and commercial necklace. The blouse, made of calico, was worn underneath a binary dress. The blouse had a rounded neckline and the sleeves were long. There was no evidence of any embellishment. The commercial necklace appeared to be made of various light and dark colored beads. Both women wearing these non-modal items appeared to be middle-aged.

Information from garments Supportive information for the time period 1871 to 1890 came from 19 extant garments. All garments in this time period were in the category of traditional dress. Thirteen garments were binary dresses while six garments were mantas.

The following characteristics were noted for the motifs, colors, fiber content, dimensions, and hand of the garments.

1. As with the previous period, geometric motifs and crosses were still the most common motifs in the borders on the dresses. There was exclusive use of geometric motifs on 14 garments. Both geometric and cross motifs were present on two garments. Two garments had horizontal, multiple striped borders with no other motifs, and one garment had only a cross motif. In this period, the borders on the garments covered one-half of the garment. Garments depicted in photographs were similar to extant garments in that the binary dress borders covered one-half or more of the garment. For both extant garments and photographs, there was declining use of multiple stripe borders in photographs from 1871 to 1890. This suggests that the binary dress with striped border was disappearing by the 1860s.
2. There was greater variety in the colors for the 19 binary dresses and mantas from 1871 to 1890 than for the garments in the 1860s. The centers of 14 garments were black and brown. Three garments had red centers, and two garments had blue centers. While colors for centers became more diverse, borders at the top and bottom continued to be red. Motif colors varied with 16 garments with blue motifs, one garment with black motifs, one garment with

green and blue motifs, and the remaining garment with red and blue motifs. To the researcher, the variety of colors for the center of the garments became more extensive during this time period. The decreased commonality of colors within this group of traditional dresses could be attributed to the expanded availability of colored yarns from the trader. During this time period commercial yarns were introduced to Navajo women by the traders. Experimentation in the color of clothing was becoming more common among Navajo women.

3. For the 19 garments, the fiber content was wool. Fabrics were handwoven and handsewn into the garments.
4. The average and ranges of dimensions for the garments were:

	<u>Average length</u>	<u>Range</u>
Binary dress	124.7 cm.	115.0-139.0 cm.
Manta	101.0 cm.	77.8-121.7 cm.
	<u>Average width</u>	<u>Range</u>
Binary dress	80.3 cm.	67.7- 91.0 cm.
Manta	134.7 cm.	120.5-145.3 cm.

There was very little difference in the dimensions of the garments from 1871 to 1890 as compared to the previous time period.

5. The hand of 13 garments was soft, smooth, and thin. Six garments, in contrast, were coarse, rough, and very thick.

Information from interviews The four elderly women did not provide supportive information related to the traditional mode from 1871 to 1890.

Summary and discussion In the period 1871 to 1890 there was diversity in the traditional garments worn by the Navajo women. As compared to the 1860s, more types of garments were worn together. The sash increased in use, and in addition, some women wore the concho belt on top of the sash. Leggings and moccasins continued to be worn. Types of jewelry became more diverse and included the Navajo necklace, the Navajo pendant, commercial necklaces, bracelets, rings, and earrings. The availability of goods from the traders could be attributed to the increase in jewelry items. Figure 5 shows the modal dress items of the traditional category from 1871 to 1890. The Navajo woman, depicted with her husband, is wearing the binary dress, Navajo necklace, a sash belt visible from the fringe, leggings, and moccasins. Figure 6, also in the traditional category, shows a woman wearing the binary dress, Navajo necklace, a sash, and leggings and moccasins. The woman also wears non-modal items such as the concho belt and bracelet.

A number of physical characteristics were noted in examination of extant garments. The variations in colors used for the binary dress of this period conveyed a bold and vibrant visual effect. Traders may have been responsible for expanding the colors of yarns available to weavers. The geometric motif was still the most common motif but there was also a decrease in the number of garments with horizontal multiple striped borders. The tactile effect was soft for two-thirds of the handwoven and hand constructed garments. This was an increase in a soft hand from the previous period where a little over one-half of the dresses had a soft hand. The soft hand of the garments in this time period could be attributed to well worn garments as fewer finely woven garments were being

Figure 5. Navajo woman wearing modal items of the traditional category of dress, 1871-1890.
Photograph courtesy of Museum of New Mexico, #59435.



Figure 6. Navajo woman wearing the modal items of the traditional category of dress, 1871-1890.
Photograph courtesy of Museum of New Mexico, #15720.



made upon the return from Bosque Redondo or to the use of softer commercial yarns available from traders. On the other hand, the coarse tactile effect of some garments may be attributed to the incorporation of various breeds of sheep that replaced the ones used prior to Bosque Redondo. Evidence of a transition from the women's producing finely woven garments for themselves to weaving heavier and thicker rugs which were in demand by the traders could be another factor contributing to the coarse hand of the garments.

Adaptive mode: 1871 to 1890 The 22 women depicted in photographs for the adaptive mode ranged in age from adolescence to the elderly. The average number of dress items worn per woman was 5.50 (see Table 5). The adaptive mode of dress consisted of the blouse and skirt worn by 21 women, with 11 of these women also wearing the Navajo necklace. Moccasins were worn by 11 women; all but one of these 11 women also wore leggings. The final modal item was the sash which was worn by nine Navajo women. Examples of non-modal items worn by one woman were a dress, Navajo necklace, and shoes. The commercial blanket, appearing for the first time, was worn by six women.

Design details were noted for the blouses and skirts in the photographs. For the blouses the following characteristics were noted.

1. Blouse fabrics for this period varied. Ten of the blouses were made of calico print, and one blouse was velvet. The remaining ten blouses were either plain or checked, large flowered, or dotted prints. The variety of prints seemed to suggest that calico and other prints were popular and easy to obtain.

2. There were no tucks visible in the blouses. This simple style of blouse could be made easily and without much sewing.
3. Necklines varied with v-shapes for eight blouses and round necklines on six blouses. All blouses were collarless. Again, the simple styles seemed to appeal to the Navajo women.
4. The sleeves of 12 blouses were three-quarter length, and eight blouses had long sleeves. Three-quarter length sleeves may have been accommodating to the Navajo woman's household chores of sheep tending and weaving.
5. Cuffs with no buttons were present on nine of the blouses, while seven blouses had no cuffs. The absence of cuffs or of buttons on cuffs could suggest that Navajo women regarded cuffs or buttons as cumbersome. On the other hand, buttons may have been a luxury item and could not be afforded.
6. The embellishment on two blouses consisted of silver buttons. Seventeen of the blouses had no embellishment. The absence of embellishment would suggest that most Navajo women could not afford to purchase button embellishment.
7. Twelve of the women wore their blouses tucked in the skirt and six of the women wore their blouses out. Most Navajo women who wore their blouses tucked in the skirt also wore sashes or belts around the waist.

For the skirts in the adaptive category, the following characteristics were coded.

1. The fabrics of eleven skirts were calico. Nine skirts were made of various calico prints and solid colored fabrics. One skirt

had two different materials. The abundance of calico skirts would suggest that calico was one of the fabrics most widely available from the traders.

2. Three of the skirts had one flounce and eleven of the skirts had none. The lack of flounces on a skirt would suggest a simple style to correspond with the simply styled blouses. Skirts with flounces would take more time in sewing.
3. Twelve Navajo women wore their skirts at ankle length. One woman wore her skirt just below the knee. The ankle length style is similar to the American fashion worn by non-Navajo women at this time. The knee length skirt of one woman could be attributed to a shortage of material to construct the garment.

Information from garments There were no extant garments available for examination in the adaptive mode.

Information from interviews One Navajo woman informant, age 101, provided supportive information about garments from 1871 to 1890. She stated that as a little girl she wore only white material. She recalled that older women were wearing calico skirts with flour sack shirts and either sandals or moccasins. Another Navajo woman, age 75, stated that the blouse and skirt were made when trading posts were established on the Navajo reservation.

Summary and discussion From 1871 to 1890, the adaptive category of dress emerged. This category consisted of the blouse and skirt as the two basic garments. The Navajo necklace, moccasins, leggings, and sash were the remaining modal items. These four items were also worn in the traditional category of dress. Figures 7 and 8 show modal items of

Figure 7. Navajo woman wearing the modal items of the adaptive category of dress, 1871-1890.
Photograph courtesy of Museum of New Mexico, #15723.



Figure 8. Navajo woman wearing the modal items of the adaptive category of dress, 1871-1890.
Photograph courtesy of Museum of New Mexico, #15940.



dress for 1871 to 1890. In Figure 7, the Navajo woman is wearing the modal items of the calico blouse and skirt. Other modal items are the Navajo necklace and sash. The Navajo pendant and commercial blanket, non-modal items, are also worn. Figure 8 shows a Navajo woman wearing the modal items of a blouse and printed skirt. She also wears the modal items of leggings and moccasins and Navajo necklace. The bracelet, a non-modal item, is also worn.

Simple styles prevailed in the blouses and skirts that emerged in 1871 to 1890. The stylistic features of ten calico blouses included a v-neck with no collar and three-quarter length sleeves without cuffs or buttons. Blouses were rarely embellished, and most women wore their blouses tucked in the skirt. Likewise, the ankle length skirt was a simple style made of calico fabric and with a gathered waist. To the researcher, the blouse and skirt indicated an early stage of sewing for Navajo women. In this time period, new fabrics were emerging and if the Navajo women desired to use these fabrics, they would also have to become accustomed to sewing. Simply styled blouses and skirts would be easy to sew and would not take large amounts of time away from other household and weaving tasks.

A variety of fabrics and dress items provided evidence of the emerging contacts with the traders. Examples included calico and other printed fabrics, blankets, buttons, shoes, and commercial necklaces. Supportive information from a Navajo woman informant indicated that the blouse and skirt were made when trading posts were established. Another informant stated that as a little girl she wore calico skirts with flour sack shirts. In summary, the establishment of trading posts on the Navajo

reservation in the 1880s seemed to provide or expand the opportunity to obtain fabrics for the new dress styles of blouses and skirts.

Modes of dress: 1891 to 1910

Information from photographs The number of Navajo women depicted in photographs for the time period 1891 to 1910 totaled 71. The Navajo women ranged in age from adolescents to the elderly. The settings in these pictures were also varied. Photographs were taken in studios or in natural settings at home, at the loom, or on horseback. Most often the women were in groups. Twenty different dress items were worn by Navajo women. There were two modes for the time period, one for the traditional category of dress and the other mode for the adaptive category of dress. By 1891 to 1910, the distribution of women in the two modes was very uneven. Only four women wore the binary dress or manta which placed them in the traditional mode. The remaining 67 of the women were included in the adaptive mode.

Traditional mode: 1891 to 1910 The four Navajo women depicted in photographs for the traditional mode appeared to be middle-age to elderly women. The average number of dress items worn per woman was 4.25 (see Table 5). The traditional mode of dress for this time period consisted of the binary dress worn by the four Navajo women; and the Navajo necklace, Navajo blanket, and bracelet worn by two Navajo women. A non-modal item worn by two Navajo women was a blouse underneath a binary dress. The blouse could have been worn for seasonal comfort or for comfort against the skin, or it could represent a gradual change to the adaptive form of dress. The number of jewelry items worn by Navajo women in the

traditional category decreased from the previous time periods. Perhaps by the 1890s jewelry was worn more with the blouse and skirt in the adaptive category rather than with the binary dress. As compared to the previous time periods, the binary dress had decreased in use. Whereas in previous periods women of all ages wore binary dresses, by 1891 to 1910 only older women wore the dress.

Information from garments Supportive information for the time period 1891 to 1910 came from eight extant garments. As with previous periods, all garments were in the traditional category of dress. Seven garments were binary dresses and one garment was a manta.

The following characteristics were noted for the motifs, colors, fiber content, dimensions, and hand of the garment.

1. By the 1890s, the multiple striped border had been completely replaced by borders containing motifs. Seven garments had geometric motifs, one garment had a cross motif, and one garment had both geometric motifs and the cross. In contrast, the photographs depicted the Navajo women still wearing multiple striped border dresses. This could suggest that some women were still holding on to the old type of binary dress.
2. As with the period 1871 to 1890, there was a variety of colors in the garments. All but one garment had a black and brown center. The remaining garment was a manta with a red center. Colors for borders were more varied with the top and bottom borders on six of the garments being red and the remaining two borders either black or blue. Seven garments had blue motifs, and the remaining garment had red and green motifs. To the

researcher, the bright and contrasting colors prevailed from the previous time period. These bright colors, as they contrasted with the dark centers, seemed to enlarge the garment visually.

3. For the eight garments, the fiber content was wool. The fabrics were handwoven and handsewn into garments. Fiber content and fabric and garment construction methods remained constant across all extant garments in this research.
4. The averages and ranges of dimensions for the eight garments were:

	<u>Average length</u>	<u>Range</u>
Binary dress	128.8 cm.	118.3-132.0 cm.
Manta	113.3 cm.	
	<u>Average width</u>	<u>Range</u>
Binary dress	77.9 cm.	71.0- 83.0 cm.
Manta	131.0 cm.	

There was very little difference in the dimensions of the garments across the three time periods of the research.

5. The hand of three garments was soft, thin, and smooth. Five garments, in contrast, were coarse, rough, and very thick.

Information from interviews Navajo women informants did not recall information about traditional dress from this time period.

Summary and discussion As compared to the previous time periods, use of the binary dress and manta diminished rapidly. When the binary dress or manta was retained, the Navajo necklace, leggings and moccasins also continued to be worn by two of the women. In contrast, blouses were worn underneath binary dresses by two older Navajo women. From

photographs, these two Navajo women appeared to be either middle-aged or elderly. This would suggest that a small percentage of older women were clinging to the traditional dress but were also exhibiting slight acceptance of the adaptive form of dress. Blouses could also be an indication of desire for comfort against the course, rough fabric or for warmth against the cold.

The bold and vibrant colors used for binary dresses continued to prevail for this time period. The horizontal striped borders were no longer present. On the other hand, elderly Navajo women depicted in photographs still wore multi-striped bordered dresses. This could suggest retention of older styles among elderly women.

The tactile effect of the handwoven and hand constructed garments was in some cases soft and in other cases coarse and heavy. A soft hand may be evidence of garments being passed down through generations and used until they were soft and thin. A lower quality of wool, used by Navajo women, may have resulted in garments with a harsh hand. In addition, the coarser thicker fabrics were closer to those fabrics produced for rugs.

Across the study, only extant garments in the traditional category of dress were available to examine.

Adaptive mode: 1891 to 1910 The number of Navajo women depicted in photographs for the time period 1891 to 1910 totaled 67. The age representation ranged from adolescents to the elderly. The average number of dress items worn per woman was 5.95, an increase of one-half garment over the adaptive mode in the previous time period (see Table 5). The adaptive mode of dress consisted of the blouse and skirt worn by all of the 67 Navajo women. Forty-nine of these women also wore a Navajo

necklace and 33 women wore a commercial blanket. The commercial blanket was not a modal item in the adaptive mode for the previous time period. This would suggest an increase in machine made items obtained by Navajo women. Moccasins, a modal item for all the time periods, were worn by 36 women and bracelets were worn by 30 women. In comparison with the adaptive mode in 1871 to 1890, there was an increase in non-modal jewelry items. Examples included rings, earrings, brooches, and a safety pin.

Design details were noted for the blouses and skirts in the photographs. For the blouses the following characteristics were noted.

1. Twenty-nine Navajo women wore velvet blouses and twenty-two women wore calico print blouses. Nine women wore plain colored blouses and six women wore prints other than calico. The use of velvet was now apparent with almost half of the Navajo women wearing velvet blouses. However, the calico print still remained popular.
2. Sixty-six Navajo women had no tucks in their blouses. Only one woman had tucks in the shoulders. Since only one woman had tucks it would appear that Navajo women were not adopting the use of tucks, gathers, and trims found in American fashions for bodices and skirts worn by non-Navajo women of this time.
3. The simple styles of the v-neck and rounded neckline still prevailed from the previous time period. Thirty women had v-necklines and twenty-nine women had round necklines. Only five women had collars on their blouses.
4. The sleeves of 45 blouses were long. Twelve women had three-quarter length sleeves. Long sleeves seemed to prevail

more after the 1890s than from 1871 to 1890. In both time periods the sleeve lengths of blouses that Navajo women wore coincided with the American non-Navajo fashion of the day. This could suggest that Navajo women were coming into contact with non-Navajo women and adapting the length of the sleeves these women wore.

5. Only five women of the 50 women had cuffs in 1891 to 1910, while nearly half of the women in the previous period had cuffs.
6. More embellishment was found in this time period than the previous period. Fifteen women or 17 percent had buttons on their blouses. However, 47 women had no blouse embellishment of any kind. This could suggest that while some Navajo women had the money to purchase buttons, the majority lacked the money to purchase the decorative items.
7. As compared to the previous time period (1871-1890) there was a decrease in the number of Navajo women wearing their blouses tucked in the skirt. From 1871 to 1890, 55 percent of the Navajo women wore blouses tucked in while 31 or 46 percent of the Navajo women from 1890-1910 wore their blouses tucked in their skirts. Twenty-five women wore their blouses out. Some of the photographic settings are outside. Perhaps an outside setting did not demand a tucked in blouse.

For the skirts in the adaptive category, the following characteristics were coded.

1. As in the previous period, calico skirts were still the most popular. Twenty-six women had calico skirts. Sixteen women had

plain skirts and twelve women had prints other than calico. The diversity of fabrics could indicate a greater opportunity to obtain a variety of fabrics from sources such as the trader or through travel to the nearest town.

2. Thirty-one Navajo women had no flounces in the skirt. Seven Navajo women had one flounce on their skirts. As in the previous time period, Navajo women preferred the simple construction of gathered skirts with no flounces.
3. The length of skirt for 27 Navajo women was ankle length. Six women had calf length and three women had floor length. Ankle length skirts remained popular from the previous time period. This would indicate that Navajo women continued to wear the length worn by other non-Navajo women at this time.

Information from interviews All of the informants stated that they wore the skirt and blouse when they were young. Plain white material was the only fabric available to three of the women. Informant #4 wore velvet when she was 13 in the year 1918. She stated that the material was bought in stores.

Summary and discussion From 1891 to 1910 the blouse and skirt still remained the most popular dress items for Navajo women. In contrast, the binary dresses declined significantly, with the four women wearing dresses appearing to be middle-age or elderly. The modal items worn in the adaptive category for 1891 to 1910 consisted of the blouse and skirt, the Navajo necklace, moccasins, commercial blanket, and bracelets. The commercial blanket appears as a modal item for the first time. Apparently, by 1890 Navajo women preferred buying their blankets

rather than weaving them as in earlier periods. The last modal item was bracelets worn by 30 women. In 1891 to 1910 there seems to be an increase in the number of Navajo women wearing jewelry and embellishment. This could suggest that the Navajo women were obtaining more jewelry from traders through the selling of their woven rugs or by trading with other tribes in the area.

Figures 9 and 10 show modal items of the adaptive mode of dress for 1891 to 1910. Figure 9 depicts a Navajo woman wearing the modal items of the blouse, skirt, and Navajo necklace, commercial blanket, and moccasins. Figure 10 shows three Navajo women of different ages. Each woman is wearing the skirt and blouse with a Navajo necklace and commercial blanket. An additional modal item, the bracelet, is worn by the young girl.

While blouse and skirt styles remained simple, some garment details provided evidence of expanding contacts with non-Navajos. Materials such as velvet and taffeta were now available for the Navajo woman to purchase. Velvet blouses were becoming more visible during this time period and a v-neck or rounded neckline was popular. Variations in skirt length and sleeves were also noticeable from the photographs. The sleeves were long with no cuffs or embellishment and the blouse was worn tucked in. The skirt of this time period was made of calico fabric, was ankle length, and had no flounce.

The time period of 1891-1910 was a culmination of gradual changes in Navajo women's dress. Within 50 years Navajo women had managed to change from woven dresses of wool to skirts and blouses made of calico and velvet.

Figure 9. Navajo woman wearing the modal items of the adaptive category of dress, 1891-1910.
Photograph courtesy of Museum of New Mexico, #72612.



Figure 10. Group of Navajo women wearing the modal items of the adaptive category of dress, 1891-1910.
Photograph courtesy of Museum of New Mexico, #15930.



Hypotheses

Hypothesis 1: 1860 to 1870

Hypothesis 1 stated that for the time period 1860 to 1870, forms of female dress will convey:

- a) evidence of nearly exclusive use of traditional Navajo attire.
- b) evidence of some use of new fabrics and non-Navajo forms of dress.

Table 7 summarizes for each time period, the mode, non-modal garments, characteristics of extant garments, and details of garments in photographs. The table served as a basis for making decisions about acceptance of the hypotheses.

Part A of Hypothesis 1 was supported. There was exclusive use of traditional attire among the Navajo women in the photographs. The handwoven binary dress was worn with the Navajo necklace, leggings, and moccasins. The extant garments had striped or geometric motif borders, black and brown centers, and were well worn or finely woven. Part B of Hypothesis 1 was not supported. From the photographs depicting Navajo women, none of these women wore new fabrics or a non-Navajo form of dress. The rations of cloth, given for clothing at Bosque Redondo, did not appear in the photographs.

Roach and Musa's factors that influence the forms of dress were used to identify events in Navajo society that may have been associated with Navajo dress (see Table 1). The factors of political events, social and economic conditions, and social structure seemed to be associated with Navajo women's dress from 1860 to 1870. During much of the 1860s, Navajo

Table 7. Summary of time periods for traditional and adaptive modes

Photographs	1860-1870		1871-1890		1891-1910	
	Traditional	Adaptive	Traditional	Adaptive	Traditional	Adaptive
1. Number of subjects	(11)	(22)	(18)	(22)	(4)	(67)
2. Percentage of women	100%	52%	48%	52%	6%	94%
3. Average number of items per woman	4.00	5.50	5.00	5.50	4.25	5.95
4. Items in mode	binary dress Nava jo necklace leggings moccasins	blouse skirt Nava jo necklace moccasins leggings sash	binary dress Nava jo necklace sash moccasins leggings	blouse skirt Nava jo necklace moccasins leggings sash	binary dress Nava jo necklace Nava jo blanket bracelet	blouse skirt Nava jo necklace commercial blanket moccasins bracelets
5. Non-modal items appearing for first time	sash bracelets earrings	commercial blouse shoes dress	concho belt blouse commercial necklace	commercial blouse shoes dress	binary dress Nava jo necklace Nava jo blanket bracelet	safety pin broochs rings commercial buttons
6. Characteristics of blouses from photographs		variety of prints, solids and calico no tucks 3/4 sleeves no cuffs or embellishment blouses tucked in V- or round- neckline				variety of velvet and calico no tucks V- or round- neck long sleeves no cuffs no embellish- ment blouse tucked in
7. Characteristics of skirts from photographs		calico no flounce ankle length				calico no flounce angle length

Table 7. (Continued)

	1860-1870 Traditional	1871-1890 Traditional	1891-1910 Traditional	Adaptive
<u>Extant Garments</u>				
8. Characteristics of extant garments	geometric motif and striped borders black and brown centers red borders hard; soft, thin and smooth	geometric motif and striped borders variety of colors in border black, blue, and red centers hard; soft, thin and smooth	geometric motif borders variety of colors in border hard; coarse, rough and thick	Adaptive

women were interned at Bosque Redondo where they were exposed to another culture and new materials. Navajo women had to adopt a new way of living and were required to live according to rules given by the United States government. Socially, Navajo women did not have control over their lives, as in the past. The women had little time to weave nor the skills to sew machine-made fabrics. It is suggested that Navajo women interned at Bosque Redondo had the desire to keep what was left of their traditional clothing and may have used the rations of cloth and available wool for other purposes. For the Navajo women, their traditional clothing may have provided a symbolic link with a more stable past and a period when women's roles were well defined.

Hypothesis 2: 1871 to 1890

Hypothesis 2 stated that for the time period 1871 to 1890, forms of female dress will convey:

- a) an adaptive form of dress as an alternative to the traditional form of dress.
- b) use of fabrics and commercial goods from traders as alternatives to traditional handwoven wool fabrics.

Part A of Hypothesis 2 was supported. From the photographs depicting Navajo women during this time period, 52% of the women were wearing an adaptive mode of dress. Simply styled blouses and gathered skirts were worn with a sash, the Navajo necklace, moccasins, and leggings. The traditional mode of the remaining 48% of the women included the handwoven binary dress, Navajo necklace, Navajo blanket, and bracelet. The dresses had brightly colored borders and motifs. The hand of the dresses was

soft, thin, and smooth which suggested they were finely woven or well worn. Part B of Hypothesis 2 was also supported. A variety of fabrics and commercial goods was visible in the photographs of Navajo women (see Table 7). In evidence were commercial blankets, shoes, dresses, and skirts and blouses made of calico, solids, and a variety of other prints.

Once again Roach and Musa's factors that influence the forms of dress were used to identify events in Navajo society that may have been associated with Navajo dress. The factors of culture contact and trade, socioeconomic conditions, and social structure seemed to be associated with Navajo women's dress from 1871 to 1890. After the return from Bosque Redondo, Navajo women once again owned sheep and land. The craft of weaving changed from weaving for apparel and home use to weaving for commercial trade. Navajo women regained their status as important economic contributors to the welfare of their families. Navajo women may have used their personal resources to acquire new fabrics and commercial goods at the trading posts. For some Navajo women, economic independence and the goods provided by the traders afforded the opportunity to make the transition to an adaptive form of dress. For other women, the brightly colored yarns may have provided opportunities for experimentation in colors for the binary dress of 1871 to 1890.

Hypothesis 3: 1891 to 1910

Hypothesis 3 stated that for the time period 1891 to 1910, forms of female dress will convey:

- a) evidence of exclusive use of the adaptive form of Navajo attire.

- b) evidence of use of a variety of fabrics and commercial goods brought by the railroad and utilized by Navajo women.

Part A of Hypothesis 3 was supported. For the time period 1891 to 1910, 94% of the Navajo women depicted in photographs wore the adaptive mode of dress. The blouses and skirts were simple, but with a greater variety of fabrics, including velvet. The commercial blanket was now a modal item. Remaining modal items were moccasins, bracelets, and the Navajo necklace. Older women were included as a small percentage of Navajo women wearing the traditional form of dress. Their garments, while retaining a variety of strongly contrasting colors, were now coarse, rough, and thick. Part B of Hypothesis 3 was also supported. There was evidence of a wide variety of fabrics and commercial goods. Commercial goods included safety pins, brooches, rings, buttons, and blankets (see Table 7). In addition to a variety of fabric prints, velvet was worn by 29 of the 67 of the women in the adaptive mode. The increased use of commercial goods and machine produced fabrics lends support to the railroad as a mechanism for expansion of the range of goods available to Navajo women.

Roach and Musa identified that technology, culture contact, trade, and social structure influence the forms of dress in a society (see Table 1). During 1891 to 1910, the railroad opened near the Navajo reservation in Manuelito, New Mexico. The railroad brought cheaper machine produced textiles and commercial goods at a faster rate than during the previous time periods. People from the east settled along the railroad route and brought new ideas regarding dress. Some Navajo women worked as household servants in towns near the reservation, and these Navajo women could have

adopted dress ideas from their employers and in turn served as visible models for dress on their return to the reservation. During the 19 years from 1891 to 1910, Navajo women had expanded their contacts with the outside world, which enabled them to stabilize their status and experience prosperity once again.

CONCLUSIONS.

The purpose of this study on Navajo women's dress was twofold. The first purpose, addressed in the previous chapter, was to establish modes for Navajo women's dress and to investigate how changes in women's dress were associated with specific events in Navajo history from 1860 to 1910. The second purpose was to propose functions for women's dress in this time period. Functions for dress are proposed in this chapter and are followed by recommendations for future research.

Functions for Navajo Women's Dress

Roach and Eicher (1979) asserted that dress, as a communicative symbol, serves important functions in human lives. These functions included the defining of social, political, economic, and religious roles through dress. Dress can also provide recreation and an aesthetic experience and be used to attract the opposite sex.

During the period of 1860 to 1871 it is proposed that Navajo women's dress assisted women in reacting to their changing economic status and social roles and in communicating resistance to enforced political change. Navajo women were interned at Bosque Redondo and had few sources for food or clothing. The clothing they did have was expected to last through the internment. Supplies in the form of new clothing did not always arrive at the designated time. No doubt the deteriorating condition of the clothing over time conveyed the economic hardship experienced by the women. At Bosque Redondo, the social status of Navajo women was in transition from the important social status long enjoyed by Navajo women. The binary

dress may have reminded the women of their former standing within the tribe; the clothing may have provided a symbolic means for clinging to a social role that was diminishing in importance. Although the women were given thread, needles, and cloth to sew clothing at Bosque Redondo, they continued to sew the new cloth in the same style as the binary dress. The binary dress may have politically symbolized the women's resistance to enforced change through their retention of parts of a previous lifestyle.

During the period of 1871 to 1890, it is proposed that Navajo women's dress provided a means of communicating an elevated social status and increasing economic worth. As women regained self-confidence, clothing provided an avenue for changes in aesthetic expression. After Bosque Redondo and during the 1870s, traders established their stores in various locations throughout the reservation. The traders brought jewelry, new fabrics, shoes, and other commercial goods. Navajo women began to weave rugs for profit instead of weaving blankets and dresses; the traders promoted and sold these rugs to settlers and visitors. The new economic status of Navajo women enabled them to purchase the traders' goods to use for personal adornment. It is proposed that ownership and display of jewelry, sewing with new fabrics, and experimentation with new styles in dress provided a new aesthetic experience. The new forms of dress communicated a regained social and economic confidence.

During the last time period from 1891 to 1910, Navajo women had near total acceptance of the adaptive form of dress. It is proposed that Roach and Eicher's functions of dress as indicators of social roles and economic status, and as a source for recreation are relevant to dress in this final period. The economic status and social roles of Navajo women

had expanded. Not only were women known for their rug weaving but they also obtained jobs as servants for settlers in nearby railroad towns. The adaptive form of dress provided Navajo women with a means of not appearing too different from their employers. Upon return to the reservation, the women and their new attire could serve as role models for Navajo women. Income from weaving and outside jobs was used in acquiring an increasing number of apparel items, including commercial blankets, bracelets, brooches, safety pins, and other jewelry items. Through clothing, Navajo women could confidently convey their status within the tribe. The acquisition of these many items may have served as recreation and provided enjoyment. Navajo women now had the opportunity and the time to obtain items of dress.

Recommendations for Further Research

On the basis of the findings of this study, the following recommendations are proposed for future research.

1. Conduct a similar study on Navajo men's clothing during the same time period and compare the results with the current study. The study would provide comparative information on men's adaptation to new clothing and the functions clothing has served for Navajo men.
2. Conduct a similar study on Navajo children's clothing during the same time period and compare the results with the current study. Navajo children were often depicted in photographs with Navajo women. Knowledge on adaptation and functions of dress for Navajo children could be gained.

3. Conduct a similar study on a different tribe or culture undergoing change. Information on symbolism of clothing and adoption of western dress would be beneficial in expanding understanding of the dress changes undertaken by the Navajo and other societies in the midst of change.
4. Investigate Navajo clothing through methods other than photographs. Navajo dress could be studied in sources such as journals and diaries.
5. Conduct oral histories on material culture before human resources are gone. Valuable information can be gained by interviewing informants who would be willing to share information that could soon be lost.

SUMMARY

Historically, the Navajo have been a nomadic tribe, moving from one place to another in search of grazing land for their sheep. This lifestyle has contributed to the Navajo becoming an adaptable people. In 1858, the Navajo were forced to move to Bosque Redondo where they were subjected to a new and confining way of life. The Navajo women traditionally held a high status within the tribe. Roles as dominant and self-sufficient women were diminished during internment at Bosque Redondo. While at Bosque Redondo women were forced to wear clothing from government issue or they continued to use the clothing they brought with them.

In 1868, the Navajo returned to their homeland to find traders settled on or near the reservation. Traders provided new fabrics, tools, and jewelry and also encouraged Navajo women to weave for profit. The arrival of the railroad in the 1880s brought additional consumer goods and more economic opportunities for Navajo women. Women worked as servants off the reservation, interacted with non-Navajo women, and were able to take back to the reservation examples and knowledge of how other women dressed.

The purpose of this study on Navajo women's dress was twofold. The first purpose was to establish modes for Navajo women's dress and to investigate how changes in women's dress were associated with specific events in Navajo history from 1860 to 1910. The second purpose was to propose functions for women's dress during this time period.

Eighty-nine photographs depicting one hundred and twenty-two Navajo women were used in the research. These photographs were collected from

museums and historical societies in the southwest. Fifty-seven photographs were studied at museums; thirty-two photographs were published in texts pertaining to Navajo people. In addition, forty-eight extant garments and interviews with four elderly Navajo women and three museum curators provided supportive information on Navajo women's dress.

An instrument for coding photographs and extant garments was developed. The coding sheet and analysis were modeled on Wass's (1975) method for analyzing dress as language. A lexicon of dress was first established for items of dress worn by Navajo women from 1860 to 1910. The lexicon was used to develop a check-list type coding sheet. Modes of dress were derived by identifying items of clothing shown most frequently in the photographs. Extant garments were documented for additional and supportive information. Frequencies were established for motif, color, fiber content, and tactile hand of the garments. Interviews were summarized for information on clothing worn by Navajo women during the time period of 1860 to 1910.

Navajo women during the 1860s wore a limited number of garments and little jewelry. The model items of dress consisted of the binary dress, Navajo necklace, leggings, and moccasins. For the time period of 1871 to 1890 the adaptive form of dress emerged and more items of dress were worn together. For the adaptive form, the blouse, skirt, Navajo necklace, moccasins, leggings, and sash were the model items of dress. The traditional form of dress, still worn from 1871 to 1890 included the binary dress, Navajo necklace, sash, leggings, and moccasins. During the final time period, 1891 to 1910, there was almost total acceptance of the adaptive form of dress among the Navajo women. The number of dress items

worn together increased. Modal items for the adaptive form of dress consisted of the blouse, skirt, Navajo necklace, commercial blanket, moccasins, and leggings. In the traditional form, worn by only a few women during 1891 to 1910, the binary dress, Navajo necklace, Navajo blanket, and bracelet were used. Non-modal dress items consisted of brooches, rings, commercial buttons, and safety pins.

Hypothesis I for the time period of 1860 to 1870 stated that forms of female dress will convey: a) evidence of nearly exclusive use of traditional Navajo attire, and b) evidence of some use of new fabrics and non-Navajo forms of dress. The photographs depicting Navajo women showed exclusive use of the traditional form of dress from 1860 to 1870. There was no indication of new fabrics or non-Navajo forms of dress being worn. Part A of Hypothesis I was supported and Part B failed to be supported. Roach and Musa's factors of political events, social and economic conditions, culture contact, and social structure were associated with the way Navajo women dressed during this time. From 1860 to 1870, Navajo women were interned at Bosque Redondo, exposed to another culture, and forced to live by United States government rules. There was a shortage of wool and food; women's status diminished. Retention of traditional forms of clothing, some in poor condition, were reflective of these social, political, and economic conditions.

Hypothesis 2 stated that for the time period of 1871 to 1890 forms of female dress will convey: a) an adaptive form of dress as an alternative to the traditional form of dress, and b) use of fabric and commercial goods available from traders as an alternative to traditional handwoven wool fabrics. Of the 40 women in this time period, 22 (52%) wore the

adaptive form of dress, while 18 (48%) Navajo women wore the traditional form of dress. Part A of Hypothesis 2 was supported. Simply styled blouses and gathered skirts were worn with a sash, the Navajo necklace, moccasins, and leggings. Part B of Hypothesis 2 was also supported. A variety of fabrics and commercial goods was visible in the photographs of Navajo women. Skirts and blouses were made of calico and various other prints. Items of dress appearing for the first time were shoes, dress, and commercial blankets.

Roach and Musa's factors of culture contact and trade, socioeconomic conditions, and social structure were associated with forms of dress from 1871 to 1890. After the return from Bosque Redondo, Navajo women came in contact with the trader. The trader made available new fabrics and jewelry and encouraged Navajo women to weave rugs for profit. Once again Navajo women established themselves as matriarchs of the family and regained their importance within the social structure of the tribe.

Hypothesis 3 for the time period of 1891 to 1910 stated that forms of female dress will convey: a) evidence of exclusive use of the adaptive form of Navajo attire, and b) evidence of use of a variety of fabrics and commercial goods brought by the railroad and utilized by Navajo women. During this final time period, 67 (94%) of the 71 Navajo women depicted in photographs wore the adaptive form of dress. The adaptive form of dress consisted of the blouse, skirt, Navajo necklace, commercial blanket, moccasins, and bracelets. Only 4 (6%) of the Navajo women wore the traditional form of dress which included the binary dress, Navajo necklace, Navajo blanket, and bracelet.

Part A of Hypothesis 3 was supported. Blouses and skirts continued to be worn but in greater numbers than in the previous time period. Part B of Hypothesis 3 was also supported. There was evidence of a wide variety of fabrics and commercial goods used by Navajo women. New commercial goods consisted of safety pins, rings, buttons, velvet material, and commercial blankets.

Roach and Musa's factors of technology, culture contact and trade, and social structure were associated with forms of dress during this period of 1891 to 1910. The third time period of 1891 to 1910 foresaw a dramatic change in Navajo women's dress. The railroad brought new material and goods from the east. Navajo women were also employed as house servants in towns near the reservation. These Navajo women could have adopted the dress of their employer and served as models for other Navajo women. Navajo women were also given the opportunity to sell their rugs to tourists and settlers. This provided an extra source of income and stabilized social standing within the tribe.

Roach and Eicher's (1979) functions of dress were applied to the research findings. Roach and Eicher asserted that dress, as a communicative symbol, serves important functions in human lives. These functions included the defining of social, political, economic, and religious roles through dress. Dress can also provide recreation and an aesthetic experience and can be used to attract the opposite sex. For the first time period, 1860 to 1870, it was proposed that Navajo women used dress to communicate their changing economic status, social roles, and resistance to the enforced political change of Bosque Redondo. By continuing to wear the traditional binary dress, clothing could have

provided a means for women to cling to social and economic roles that were diminishing. Politically, dress could have symbolized Navajo women's retention of their place of authority within the tribe and of their resistance to the political changes imposed on them at Bosque Redondo.

For the time period of 1871 to 1890, it was proposed that Navajo women, through their dress, communicated their regained social status within the tribe. After Bosque Redondo, Navajo women were given the opportunity to weave for profit instead of for personal clothing. Navajo women were able to afford new fabrics and jewelry offered by traders and could convey their economic well-being through clothing. The look, fit, and feel of new fabrics and jewelry allowed the Navajo women to have new aesthetic experiences.

For the final time period, 1891 to 1910, it was proposed that Navajo women used dress as an indicator of their regained and more stabilized social and economic status. Economically, Navajo women were in a better position to obtain jobs off the reservation and to sell their rugs to settlers. Navajo women contributed to family income and enjoyed the opportunity and time to obtain and use new dress items. Therefore, dress could have functioned as a form of recreation for Navajo women.

Future research was recommended in five areas: 1) a similar study on Navajo men's clothing during the same time period, 2) a similar study on Navajo children's clothing during the same time period, 3) a similar study on the dress of a different tribe or culture, 4) use of methods other than photographs for collecting data on the history of Navajo clothing, 5) interviews with Navajo informants who have knowledge of dress worn in the past before these resources are gone.

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APPENDIX A:
LETTERS TO MUSEUMS

IOWA STATE
UNIVERSITY

Telephone 515-294-2628
515-294-2695

October 17, 1982

Maxwell Museum of Anthropology
Marian Rodee, Curator of
Collections
Roma and University, Northeast
Albuquerque, New Mexico 87131

Dear Ms. Rodee:

I am a Navajo Indian and attending Iowa State University as a graduate student in the Department of Textiles and Clothing. My area of emphasis in my graduate program is the socio-cultural aspects of dress. I am in the planning stages for my research and am hoping that you will be able to help me. My thesis research will be on the functions of Navajo women's clothing from 1860-1940. As you may well know, this time period was important in Navajo history. Dramatic changes occurred in dress during the internment at Bosque Redondo and with the Stock Reduction Program of the 1930's.

The literature pertaining to Navajo women's clothing is very limited, therefore, I have decided to use photographs and actual garments as my primary resources. Presently, I am in the process of ascertaining the availability of historic photographs and garments on Navajo women. I have divided my study into four time frames: 1860-1870, 1870-1900, 1900-1930, 1930-1940. Please indicate the number of photographs and clothing items you have of Navajo women for each time period. Please advise me as to how I might make arrangements to study the photographs and garments. In addition, do you allow copies to be made of your photographs?

My thesis research proposal will be submitted at the end of December. In order for me to proceed further I must request that the information be sent to me by the

Ms. Marian Rodee
Page 2
October 17, 1982

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first week in November. I would be grateful for any additional information that could be given concerning other institutions that have photographic archives relevant to my research.

Time frames for Navajo women's clothing are as follows:

1. 1860 - 1870 Photographs:
Garments:
2. 1870 - 1900 Photographs:
Garments:
3. 1900 - 1930 Photographs:
Garments:
4. 1930 - 1940 Photographs:
Garments:

Thank you for your time and assistance.

Sincerely,

Cynthia (Tso) Grounds
Graduate Student

Mary Littrell, Ph.D.
Assistant Professor

APPENDIX B:
HUMAN SUBJECTS FORM

INFORMATION ON THE USE OF HUMAN SUBJECTS IN RESEARCH

IOWA STATE UNIVERSITY

(Please follow the accompanying instructions for completing this form.)

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1. Title of project (please type): Navajo women's dress as associated with Navajo history from 1860-1910.

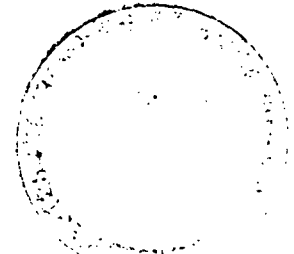
2. I agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects are properly protected. Additions to or changes in procedures affecting the subjects after the project has been approved will be submitted to the committee for review.

Cynthia Grounds 5/31/83
 Typed Named of Principal Investigator Date Signature of Principal Investigator
142 LeBaron Hall 294-2628
 Campus Address Campus Telephone

3. Signatures of others (if any) Date Relationship to Principal Investigator
_____ 6/10/83 Major Professor

4. ATTACH an additional page(s) (A) describing your proposed research and (B) the subjects to be used, (C) indicating any risks or discomforts to the subjects, and (D) covering any topics checked below. CHECK all boxes applicable.

- Medical clearance necessary before subjects can participate
- Samples (blood, tissue, etc.) from subjects
- Administration of substances (foods, drugs, etc.) to subjects
- Physical exercise or conditioning for subjects
- Deception of subjects
- Subjects under 14 years of age and(or) Subjects 14-17 years of age
- Subjects in institutions
- Research must be approved by another institution or agency



5. ATTACH an example of the material to be used to obtain informed consent and CHECK which type will be used.
 Signed informed consent will be obtained.
 Modified informed consent will be obtained.

6. Anticipated date on which subjects will be first contacted: 6 83
 Anticipated date for last contact with subjects: 7 83

7. If Applicable: Anticipated date on which audio or visual tapes will be erased and(or) identifiers will be removed from completed survey instruments: 8 84
 Month Day Year

8. Signature of Head or Chairperson Date Department or Administrative Unit
_____ 6/13/83 _____

9. Decision of the University Committee on the Use of Human Subjects In Research:
 Project Approved Project not approved No action required
George G. Karas _____
 Name of Committee Chairperson Date Signature of Committee Chairperson

APPENDIX C:
CODING SHEET FOR EXTANT GARMENTS
AND PHOTOGRAPHS

RECORDING FORM: PHOTOGRAPHS AND GARMENTS

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Picture No. _____

Garment No. _____

Source _____

Directions:

1. Check (✓) all that are present. If more than one item is present within a category, write the number. Example: If a woman has one bracelet, place a check (✓) by the bracelet category. If a woman has two bracelets write the number 2 in the bracelet category.
2. If a check is placed by any category marked with an asterisk (*), provide detailed information on the following pages.

1. TIME PERIOD

_____ 1859-1870

_____ 1871-1890

_____ 1891-1911

2. HAIR STYLE

_____ hair down

_____ hair pulled back
(back hair treatment
not visible)

_____ hair in Navajo knot

3. HEAD COVERINGS

_____ hat

_____ scarf: describe

_____ other: describe

4. HEAD & FACE ACCESSORIES

_____ barette

_____ hair ornament: describe

_____ comb: describe

_____ earrings: describe

_____ other: describe

5. NECK, ARM & HAND ACCESSORIES

_____ necklace (turquoise)

_____ necklace (coral)

_____ squash blossom necklace

_____ bracelet: describe

_____ handbag: describe

_____ ring: describe

_____ other jewelry: describe

6. UPPER TORSO COVERINGS

* _____ blouse

_____ jacket: describe

_____ blanket

_____ other coverings: describe

7. UPPER TORSO ACCESSORIES

_____ brooch: describe

_____ safety pin

8. LOWER TORSO COVERINGS & ACCESSORIES

* _____ skirt

_____ sash

_____ concho belt

_____ non-Indian belt

_____ other: describe

9. COMPLETE TORSO COVERINGS

* _____ Manta (one-piece)

* _____ Binary (two-piece)

_____ dress (calico): describe

_____ dress (other): describe

10. FOOT & ANKLE COVERINGS

_____ boots

_____ moccasins

_____ shoes: describe

_____ stockings

_____ leggings

BLOUSE

Picture No. _____
Garment No. _____
Source _____

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Item 1-8: photographs & garments
Item 9-15: garments only

1. FABRIC

_____ calico
_____ velvet
_____ other: describe

2. TUCKS

_____ sleeves: describe
_____ cuffs: describe
_____ collar: describe
_____ front: describe
_____ back: describe

3. NECKLINE

_____ collar: describe
_____ v-neck
_____ round neck

4. SLEEVES

_____ short sleeves
(elbow up)
_____ 3/4 length sleeves
_____ long sleeves (wrist)

5. CUFFS

_____ buttoned
_____ non-buttoned
_____ no cuffs

6. EMBELISHMENT

_____ buttons: describe
_____ coins: describe
_____ other: describe

7. MOTIF ON FABRIC

_____ calico
_____ stripe
_____ combination
(stripe/calico)
_____ other: describe
_____ no motif

8. WAY WORN

_____ blouse tucked in
_____ blouse worn out

9. COLOR (Munsell Student Chart)

_____ ground colors
_____ motif color

10. DIMENSIONS (In centimeters)

_____ chest width (front)
(above bust)
_____ blouse length
(neckline to hem)
_____ sleeve length
(top armscye to wrist)
_____ shoulder width
(neckline to sleeve
seam)
_____ sleeve width
_____ cuff width

11. FIBER CONTENT: Describe

12. READY TO WEAR LABEL: Describe

_____ Label
_____ No label

13. HAND

_____ Describe

14. METHOD OF CONSTRUCTION

_____ handmade
_____ machine made

15. OTHER DESIGN FEATURES

Describe:

MANTA OR BINARY DRESSES

Picture No. _____

120 Item 1,2 & 5: photographs & garments

Garment No. _____

Item 3,4,6,7 & 8: garments only

Source _____

1. STYLE

8. OTHER DESIGN FEATURES: Describe

_____ Manta

_____ Binary

2. MOTIF

_____ geometric

_____ crucifix

_____ other: describe

3. COLOR (Munsell Student Chart)

_____ ground color

_____ motif color

4. METHOD OF CONSTRUCTION

_____ hand woven

_____ other: describe

5. LOCATION OF MOTIF

_____ zone 1

_____ zone 2

_____ zone 3

_____ zone 4

_____ zone 5

_____ zone 6

_____ zone 7

6. FIBER CONTENT: Describe

7. DIMENSIONS (In centimeters)

_____ Length (neckline to hem)

_____ Width (side seam to side
seam)

APPENDIX D:
INTERVIEW SCHEDULES FOR NAVAJO WOMEN
AND MUSEUM CURATORS

MODIFIED INFORMED CONSENT

The purpose of this interview is to discuss Navajo women's clothing from the time of Bosque Redondo (1868) to just before World War I (1910). I will use what I learn in my Master's thesis at Iowa State University.

We need more Navajo viewpoints on the Navajo way of life and through the information you provide, you will be making that contribution.

The questions I will ask pertain to specific events related to Navajo women's clothing from 1860-1910. I realize that this was a long time ago, but I would like to know what you remember from stories passed down.

If there are any questions that you have about the interview, feel free to inquire as we proceed.

Your participation in the discussion is voluntary and you may discontinue the interview at any time you wish.

Your name will not be used in the thesis but each person I talk with will be given a code number so that I may keep an account of each discussion.

Do you have any questions at this time.

I. INTRODUCTION

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My name is Cynthia Grounds and I am attending school at Iowa State University. I am from the yucca-fruit clan and was born and grew up in Los Angeles, California. The reason I am here is to learn as much as I can about Navajo women's clothing from the time of Bosque Redondo to just before WWI.

General Background of Informant (ask either at beginning or end of interview, depending on individual)

Family

Where grew up? Where have you lived?

Marriage(s)?

Children?

Grandchildren?

Bilingual?

Crafts/Dressmaking skills?

Stories passed down about families life?

II. BOSQUE REDONDO

1.0 STORIES

1.1 Have you heard any stories about Bosque Redondo?

2.0 LIVING ARRANGEMENTS

2.1 What kind of living arrangements did the Navajo have at Bosque Redondo?

3.0 DAILY LIFE

3.1 Can you describe a typical day for a Navajo woman at Bosque Redondo?

3.2 Was any weaving done by Navajo women at Bosque Redondo?

3.3 Was any sewing done by Navajo women at Bosque Redondo?

3.31 Where did they acquire the cloth for sewing?

3.32 What kind of cloth?

3.33 Who taught them to sew?

4.0 CLOTHING

4.1 From the stories you have heard, what were Navajo women wearing at Bosque Redondo?

4.2 Were the Navajo women still wearing the woven shoulder blanket?

4.3 Were they wearing blouses and skirts?

4.31 Did they make them? or were they acquired already sewn?

5.0 CLOTHING RECEIVED

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- 5.1 Did the Navajo women and men receive clothing of any kind?
- 5.2 If so, what did the clothing look like?
- 5.3 From whom did they receive the clothing? military, missionaries, civilians?

6.0 SILVERSMITHING

- 6.1 Was silversmithing done at Bosque Redondo?
- 6.2 For whom? Navajo or fort personnel?

7.0 WOMEN AT BOSQUE REDONDO

- 7.1 Were there any non-Indian women at the fort?
 - 7.11 Were there any Mexican-Spanish women at the fort?
 - 7.12 Were there any military wives at the fort?

III. WOMEN'S CLOTHING

1.0 BACKGROUND

- 1.1 What did women wear in the years of Bosque Redondo up to 1911?
- 1.2 How long did the woven dresses continue to be worn?
- 1.3 Blouses and skirts?
- 1.4 Any other clothing items?

2.0 SKIRT AND BLOUSE

- 2.1 Where did the idea of the skirt and blouse come about?

3.0 GARMENT CONSTRUCTION

- 3.1 Were blouses and skirts ready-made or were they made by Navajo women?
- 3.2 By hand or by sewing machine?
- 3.3 If by sewing machine, when were the sewing machines available?

4.0 FABRICS

- 4.1 Was there a preference for a certain type of fabric over another for skirts and blouses? (note skirts and blouses)
- 4.2 Calico: when introduced and why a preference?
- 4.3 Velvet: when introduced and why a preference?

4.4 Was fabric purchased in large quantities to make clothing for the entire family? 125

5.0 PATTERNS

5.1 Were patterns used to cut out garments? What kind of garments or patterns?

5.2 How did the women acquire these patterns?

5.3 Were patterns shared with other families? Or did they stay within the family

6.0 COLOR

6.1 What colors (hues) were popular? Dark or light (values)?

6.11 For blouses?

6.12 For skirts?

6.2 Was there any relationship between the dark colors for blouses and the silver jewelry, buttons or coins?

6.3 Were there any differences in color of clothing for men and women?

7.0 STYLE

7.1 When women began wearing blouses and skirts were there a variety of styles from which to choose?

7.2 Were there favorite styles? Why?

7.3 BLOUSES

7.31 What was the neck style?

7.32 Shoulder style?

7.33 Tucks and other details?

7.34 Sleeve style and cuffs?

7.35 Worn with belt or not?

7.36 Worn outside or tucked in?

7.37 Slits at the hem?

7.4 SKIRTS

7.41 How many layers of skirts did they wear, if any?

7.42 Were they always gathered?

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7.43 One-piece?

7.44 Tiers or flounces? How many?

7.5 FOOTWEAR

7.51 What type of footwear did the women have?

7.512 boots?

7.513 slip-ons?

7.514 lace-up?

7.515 moccasins?

7.516 leggings?

7.517 stockings?

7.518 socks?

8.0 EVERYDAY OR DRESS-UP

8.1 Did women wear the same clothing for everyday as they did for dressing up?

8.2 If not, what did they wear for dressing up?

8.21 Squaw dance?

8.22 Ceremonies?

8.23 Public gatherings?

8.24 Trading post or town?

8.3 How did dress-up clothing differ from everyday clothing?

9.0 SETS OF CLOTHES

9.1 Did people have complete sets of clothes? How many?

10.0. AGE, SEX, AND MARITAL STATUS

10.1 Were there differences for women's garments among different age groups?

10.2 Were there differences between men's and women's shirts?

10.3 Were there differences between men's and women's blankets?

10.4 Were there any symbols of marital status in the women's appearance?

11.1 How often were the clothes washed and how were they washed?

11.12 Hot or cold water, kind of soap if any?

11.2 Did the women iron clothes?

IV. ADORNMENT AND DECORATION FOR WOMEN (PAST)

1.0 BACKGROUND

1.1 Do you have any old pieces of jewelry that have been handed down? Please describe.

1.2 Do you have old garments? Please describe.

1.3 Do you have any old garments with coins on them? Other decorations? Buttons? Please describe.

2.0 JEWELRY

2.1 Where was jewelry worn?

2.2 What kinds of jewelry were worn and preferred?

2.3 How did the women acquire jewelry?

3.0 COINS ON BLOUSES

3.1 When did women begin sewing coins on blouses?

3.2 Were there any specific reasons for having coins on blouses?

3.3 Were the coins used on any other women's garments?

3.4 Was there a preference for certain denominations of coins?

3.5 How did the women obtain the coins?

4.0 BUTTONS ON BLOUSES

4.1 Did the women use buttons on their blouses?

4.2 What were the reasons for buttons on blouses?

4.3 Were buttons put on any other garments?

4.4 What kind of buttons did the women use and what did they prefer?

4.5 How did the women obtain the buttons?

5.0 PRESTIGE AND ADORNMENT

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- 5.1 Was there a relationship between the number of sheep a woman owned and the amount of jewelry owned?
- 5.2 Was a woman with alot of jewelry considered to have prestige?
- 5.3 Did ownership of blouses with coins contribute to prestige?
- 5.4 Did ownership of blouses with buttons contribute to prestige?
- 5.5 Was there any other decoration, fabric, or aspect of clothing that would contribute to prestige?

V. NAVAJO WOMEN'S STATUS (1860-1910)

1.0 TYPICAL DAY

- 1.1 Can you describe a typical day for Navajo women from the time of Bosque Redondo to 1910?

2.0 SOCIAL INTERACTIONS

- 2.1 With whom did Navajo women interact?
- 2.2. Other Navajo women? When?
- 2.3 Family men and women? When?
- 2.4 Non-family men and women? When?

3.0 AGE DIFFERENCES

- 3.1 What was expected of females of different ages? During the period 1860-1910?
- 3.2 Children?
- 3.3 Teenagers?
- 3.4 Young adults?
- 3.5 Middle-age?
- 3.6 Old woman?

4.0 RECOGNITION

- 4.1 How did women gain recognition?
- 4.2 Family?
 - 4.21 Mothers clan?
 - 4.22 Fathers clan?

4.3 Land ownership?

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4.4 Marriage? Who one married or if married?

4.5 Number of children?

4.6 Number of livestock owned?

4.61 Who owned it? Husband or wife?

4.7 Amount of jewelry owned?

4.8 Amount of clothing owned?

4.9 Weaving? If could weave or were particular good?

4.10 Other crafts?

VI. PURCHASING CLOTHING AND MATERIAL (TRADING POST OR OTHER)

1.0 GENERAL QUESTIONS

1.1 When cloth became popular for clothing, where were cloth and clothing obtained?

1.2 Were there sources for clothing or fabrics other than the trader?

1.3 How far did people live from the trading post?

1.4 How long was the trip to the trading post? How long did they normally spend at the trading post? Overnight? How did they travel to the trading post?

1.5 How often did they go to the trading post and how often did they obtain their clothing or material?

1.6 Did they go to only one trading post?

1.7 What time of the year did people most commonly travel to the trading post?

1.8 Did the whole family go on the trips to the trading post?

2.0 PURCHASING AT THE TRADING POST

2.1 Did they have a large selection of fabrics?

2.11 What types of fabrics were available?

2.2 Were sewing supplies and notions available? If they were, did Navajo women tend to buy them?

2.3 Was underwear available? If so, what did they buy?

2.4 Were shoes available at the trading post? If so, what were they like? 130

2.5 Did the trader carry clothing for the entire family? Were there many types of clothing available?

3.0 INTERACTIONS

3.1 Who else did the women see at the trading post?

3.12 Other Indians?

3.13 Soldiers?

3.14 Other traders?

3.15 Tourists, settlers?

MUSEUM QUESTIONS

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I. INTRODUCTION

My name is Cynthia Grounds and I am attending school at Iowa State University. I am from the yucca-fruit clan and was born and grew up in Los Angeles, California. I am trying to find out as much as I can about Navajo women's clothing from 1860-1910. I am interested in identifying events that contributed to change in dress. Since I know you are very knowledgeable on the subject, I thought I might gain some insight from you.

I. COLLECTIONS

- 1.0 Does the museum have permanent collections of Navajo women's clothing?
- 1.1 How did the museum obtain these items?
- 1.2 Do you believe that Navajo women's clothing will be an area for expansion in the years ahead?
- 1.3 How does your Navajo clothing collection relate to the overall purpose and philosophy of your museum?

II. CHANGES

- 1.0 Based on the items in your collection, how does the style and quality of Navajo women's garments change over the years?
- 1.1 Woven dresses?
- 1.2 Non-woven dresses? (skirts & blouses)

III. INFLUENCES

- 1.0 Who do you believe were the principle people to influence changes in clothing styles in the period from 1860-1910? Especially from woven garments to purchased cloth and sewn garments from patterns?
- 1.1 Military?
- 1.2 Spanish or Mexican?
- 1.3 Other Indians?
- 1.4 Settlers or missionaries?

IV. NAVAJO WOMEN

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1.0 Have you had the opportunity to interview older Navajo women about dress styles?

1.1 If yes, what did you learn? Who, when, where did you learn from them?

V. RELIABLE SOURCES

1.0 What sources and references do you believe are the most reliable on Navajo women's clothing?

1.1 Photograph collections?

1.2 Clothing collections?

1.3 Researchers?

1.4 Publications?

VI. EXPERIENCES

1.0 What are your experiences related to the study of Navajo dress?

1.1 Formal schooling?

1.2 Classes?

1.3 Conferences?

1.4 Reading?

1.5 Study of collections?