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Restoring Navajo-Churro Sheep: Acculturation and Adaptation of a Traditional Fiber Resource

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Factors that contribute to artisan sustainability are of critical importance to the world's artisans who depend on hand-produced textiles for income and for whom textile production is interwoven with cultural identity. Among the factors that influence artisan sustainability are the raw materials available to artisans. Traditional fiber resources are one category of raw materials that may be available to artisans. This paper focuses on the Navajo-Churro breed of sheep,¹ a traditional fiber resource for wool used to make Navajo textiles. This paper describes the Navajo-Churro breed of sheep (figs. 1 and 2), its acculturation by the Navajo people, and its path to near extinction. In addition, results are presented from research conducted with a community-based Navajo organization dedicated to restoring Navajo-Churro sheep to Navajo lands, culture, and textiles.



Fig. 1. (left) Navajo-Churro sheep, ram (author's photo, 2004).
Fig. 2 (right) Navajo-Churro sheep, ewe (author's photo, 2004).

The story of Navajo-Churro sheep is intertwined with Navajo history, economy, and culture. The Navajo people (or *Diné*) first obtained sheep from sixteenth century Spanish explorers who introduced Spanish *Churro* sheep, a desert breed, into the American Southwest. Succeeding generations of these hardy sheep evolved into the Navajo-Churro breed that thrived in the high desert environment of the Navajo Nation. The Navajo people acculturated agro-pastoralism and weaving based on the Spanish sheep and wool. Navajo-Churro sheep provided a stable source of food and a fiber resource with fleece well suited for hand spinning and weaving into distinctive Navajo textiles.²

¹ Terms used for Navajo-Churro sheep in the literature include Navajo sheep, 'old-type' Navajo sheep, Spanish sheep, Navajo 'scrub' sheep, and Churro, among others. The name used in this paper, Navajo-Churro sheep, was selected for this lineage of sheep when the Navajo-Churro Sheep Association formed in 1986.

² Joe Ben Wheat, *Blanket Weaving in the Southwest* (Tucson: University of Arizona Press, 2003).

Sheep owned by Navajo people have included the Navajo-Churro, various ‘improved’ breeds³ introduced onto Navajo lands, and the resulting crossbred sheep. Navajo-Churro sheep, however, have physical characteristics distinct from improved breeds. The Navajo-Churro may be considered a ‘local’ domesticated breed, a type of livestock that has adapted well to a regional climate and vegetation, has developed disease resistance, and can make the most efficient use of resources in marginal environments.⁴ Smaller than improved breeds, the Navajo-Churro eat less, have narrow bodies, long legs, and light bones that enable them to walk long distances to graze on arid land. Their faces, legs, and abdomens have little fleece to snag on desert plants. They are known for fecundity: ewes mature early, lamb easily, often produce twins and triplets, and fiercely protect their lambs.⁵

Navajo-Churro fleece also differs from improved breeds. Navajo-Churro fleece is coarse and open with no defined crimp. Its low grease content repels sand and dust, and may not require washing (an advantage in the desert). Natural colors of fleece include creamy white, brown, light tan, black, gray, blue gray, and multi-colors. Navajo-Churro fleece consists of a characteristic double coat: a protective outer coat of long hair fibers (6-12 inches in one year’s growth) and an inner coat of fine wool fibers (10-35 microns in diameter) 5 inches or less in length. There is also a variable amount of short, opaque kemp fibers (65 or more microns in diameter). The fleece dyes well, spins easily with a Navajo spindle, and weaves into durable, lustrous textiles.⁶ In addition to their ecological significance, Navajo-Churro sheep hold historic and sacred value. The Navajo-Churro have historic significance as the earliest domesticated source of wool for Navajo textiles.⁷ Navajo origin stories describe Navajo-Churro sheep as sacred animals given to them by the Holy People.⁸

By the early twentieth century, however, the Navajo-Churro composed only an estimated five percent of reservation sheep.⁹ By the 1970s, the American Livestock Breeds Conservancy (ALBC) estimated no more than 450 Navajo-Churro sheep had survived.¹⁰ The reduction in number is attributable to several influences. During the

³ Improved breeds exhibit high production within controlled environments. ‘Improved’ sheep breeds—Merino and Rambouillet, for example—have been selectively bred to weigh more and yield a heavier coat of fine, white fleece desired by commercial woolen mills.

⁴ Ilse Köhler-Rollefson, “Community-based management of animal genetic resources—with special reference to pastoralists,” *Community-based Management of Animal Genetic Resources: Proceedings of the Workshop Held in Mbabane, Swaziland* (2001, July): 13-26.

⁵ Cecil T. Blunn, “Improvement of the Navajo Sheep,” *The Journal of Heredity* 31 (1940, March): 98-112; Cecil T. Blunn, “Characteristics and Production of Old-Type Navajo Sheep,” *The Journal of Heredity* 34 (1943, May): 141-152.

⁶ James O. Grandstaff, *Wool Characteristics in Relation to Navajo Weaving, Technical Bulletin No. 790* (Washington, DC: US Department of Agriculture, 1942); Navajo-Churro Sheep Association Web site: <http://www.navajo-churrosheep.com>

⁷ Lynn R. Bailey, *If You Take My Sheep—: The Evolution and Conflicts of Navajo Pastoralism, 1630-1868* (Pasadena, CA: Westernlore Publications, 1980).

⁸ Gladys Reichard, *Spider Woman* (New York: Macmillan, 1934).

⁹ James O. Grandstaff, *Wool Characteristics in Relation to Navajo Weaving, Technical Bulletin No. 790* (Washington, DC: US Department of Agriculture, 1942).

¹⁰ The ALBC is a non-profit organization with a mission to protect breeds of domesticated livestock from extinction. Retrieved from the ALBC Web site on October 26, 2004: <http://www.albc-usa.org/>

1860s, thousands of Navajo-Churro sheep were destroyed as part of a federal campaign to subdue and displace the Navajo people. After four years of internment, a treaty with the American government returned the Navajo people to their homelands. Many of the relatively few remaining Navajo-Churro, however, were crossbred with improved breeds to increase weight and fleece yield for commercial markets.¹¹ Since the 1800s, other sources of fiber and yarn have been introduced, often replacing hand processed sheep wool; many Navajo weavers found the introduced materials more cost- and time-effective for making textiles.¹² During the 1930s, the federal government carried out livestock reductions on the reservation, spurred by overgrazing, that led to the near-extinction of the Navajo-Churro.¹³ In addition, twentieth century agriculture in general discouraged the use of such local breeds as Navajo-Churro sheep. Instead, monocultures were favored, emphasizing a smaller number of improved livestock breeds. Isolated, indigenous cultures are particularly vulnerable to the perceived lack of economic value in local breeds:

Navajo-Churro sheep are a good example of a breed shaped by close interaction with humans in a challenging environment. As mainstream America hurried down its path to prosperity and success, many cultures and situations in isolated regions were simply left out, to varying degrees. This resulted in little appreciation for these sheep, for their role in their original location, and for the products they offered.¹⁴

From 1936 until 1966, the Southwestern Range and Sheep Breeding Laboratory (SRSBL)—established as part of depression-era New Deal policy—conducted research about Navajo-Churro sheep and wool, their relationship to Navajo weaving, and the results of cross breeding them with improved breeds. Among other findings, SRSBL animal scientists found Navajo-Churro fleece well suited for Navajo spinning and weaving techniques.¹⁵

A resurgence of effort to restore Navajo-Churro sheep to the Navajo people has occurred during the past 25 years. McNeal founded the Navajo Sheep Project (NSP) at Utah State University during the 1980s. Through the NSP, he painstakingly located a number of Navajo-Churro sheep from the reservation. He developed a breeding flock of more than 400 sheep, many of which he returned to Navajo herding and weaving families.¹⁶ The NSP was the umbrella organization for *Diné be' iina'* (DBI or the Navajo

¹¹ Gale Bailey and Roberta G. Bailey, *A History of the Navajos: The Reservation Years* (Santa Fe, NM: School of American Research Press, 1986).

¹² Ann Lane Hedlund. "Commercial Materials in Modern Navajo Rugs." *American Indian Art Magazine* (2003, Summer): 44-55.

¹³ Gale Bailey and Roberta G. Bailey, *A History of the Navajos: The Reservation Years* (Santa Fe, NM: School of American Research Press, 1986).

¹⁴ D. P. Spononberg and Donald E. Bixby. "Rare Sheep Breeds," in *Handspun Treasures from Rare Wools* (Loveland, CO: Interweave Press, 2000): 14-19.

¹⁵ Cecil T. Blunn, "Improvement of the Navajo Sheep," *The Journal of Heredity* 31 (1940, March): 98-112; Cecil T. Blunn, "Characteristics and Production of Old-Type Navajo Sheep," *The Journal of Heredity* 34 (1943, May): 141-152; James O. Grandstaff, *Wool Characteristics in Relation to Navajo Weaving, Technical Bulletin No. 790* (Washington, DC: US Department of Agriculture, 1942).

¹⁶ Lyle McNeal (Ed.). *Wool on a Small Scale* (Logan, UT: Utah State University, 1986).

Lifeway), a community-based Navajo organization founded in 1991 that works to restore Navajo-Churro sheep to Navajo lands, culture, and textiles. Dedicated to conserving the traditional Navajo-Churro sheep breed, DBI educates the community and the public about the importance of Navajo sheep culture and spirituality through educational outreach events to Navajo and non-Navajo people.

Research for this study focuses on *Diné be' iina'* and explores inductively Navajo-Churro wool as a traditional fiber resource and a factor of intervention for sustaining Navajo artisans. The study uses an interpretive (naturalistic) design, defined as an inductive research process conducted in a natural setting. Triangulating multiple data sources establishes validity for this study; consistent transcription of interviews, observational field notes, establishment of inter-rater reliability, and participant members checks contribute to reliability.¹⁷ Research methods included a literature review, participant observation at DBI workshops and events, in-depth interviews with a purposive sample of DBI members (leadership, in particular), field notes and photography, and supporting interviews with other individuals involved with DBI. These provided qualitative data for analysis and reporting.¹⁸ The majority of data was collected on the Navajo Nation. Events included artisan workshops, meetings, and the Sheep is Life Celebration (SiLC), DBI's major annual event. The SiLC brings together people from Navajo, Anglo, Hispanic, and other cultures for two free days of stock shows, vendor sales, demonstrations, a wool buy, rug auction, and presentations ranging from herd health to marketing textiles.

Four major inductively derived themes emerged from analysis of qualitative data. These two themes describe linkages between the Navajo-Churro as a traditional fiber resource and Navajo culture and textiles. Two themes most relevant to the interests of the Textile Society of America are discussed here. The first theme defines components of Navajo cultural identity that are linked with Navajo-Churro sheep. The second theme reveals ways that Navajo artisans in this study imbue the process of using Navajo-Churro fleece with cultural meaning.

Within the first theme of Navajo cultural identity, perhaps foremost among the component sub-themes is the physical return of Navajo-Churro sheep to the Navajo Nation and to Navajo families. Owning Navajo-Churro sheep is a significant component of cultural identity in itself. Each participant in this study considered returning Navajo-Churro sheep to Navajo lands and people as the driving force behind DBI. One participant summarized a shared objective: "The project right now is pretty simple, you know. Our main focus is to introduce the Churro back to the reservation, back to the Navajos. It is all around that." (09)¹⁹ Members who had held leadership positions in DBI describe the significance of returning the Navajo-Churro to the reservation:

¹⁷ Yvonne S. Lincoln and E. G. Guba. *Naturalistic Inquiry* (Beverly Hills, CA: Sage, 1985).

¹⁸ B. G. Glaser and A. Strauss. *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine, 1967).

¹⁹ The number within parentheses represents the code number for the participant who provided the quotation. Code numbers assure anonymity to participants. Code numbers also demonstrate that data analysis and theme development drew from a range of participants.

The most, in my life that I've seen, that I witnessed, was the return of the Churro sheep. To have been part of that, and continuing to reintroduce the Churro sheep back to some more people who don't have that, was for me the most positive thing that I've seen, the return of the Churro. (01)

I remember when we first brought the sheep back. My sister had this sheep for a while, and then we had this grandpa that lived way across from us. One day he came over to visit, and he was sitting behind the shade house. I said, "Why are you crying for, Grandpa?" He said, "It's been a long time since I've seen these sheep. I'm so happy that they're here again." (14)

Restoring Navajo-Churro sheep means more than their physical return to Navajo corrals and grazing lands. An equally important component is increasing the awareness about the historical, sacred, and ecological value of Navajo-Churro sheep within Navajo tradition:

There's a lot of history involved. When I got on there [DBI board], I didn't know the history of the Churro sheep—how it came here, how it got terminated in the Thirties with the stock reduction. That was so sad. They were the first ones to go. (13)

I didn't think the Navajo-Churro sheep were all that great, but that was their [DBI] focus. However, when I look back on the history, there's a profound respect for the sheep, and they contributed to that history. (12)

I think the most valuable changes they [DBI] are doing are to re-introduce the Churro sheep because we consider it a sacred animal—to be able to teach the community that it is considered a sacred animal. It has its own chant. (09)

Participants believe that increasing awareness of the historic, sacred, and ecological value of Navajo-Churro sheep had tended to renew interest in raising sheep:

I think it [DBI] revived people's interest in dealing with sheep, which was kind of going away because after the sheep reductions they were so focused on looking at horses and cattle as the livestock. . . . I think it revitalized some of that intent to bring these animals back and have them be part of the culture, because they were a very significant part of the culture back in time. (14)

The agro-pastoral legacy of Navajo families who raise sheep is another component of cultural identity. Family heritage and childhood memories of herding sheep had influenced each Navajo participant in this study and could spur individual decisions to own Navajo-Churro sheep.

We can keep our sheep and still live in the modern world, still know that our great great grandchildren will have the opportunity to herd sheep like our ancestors did. That is disappearing. I herded sheep, and I would like to see my daughter's great great grandchild herd sheep. (08)

Sheep and wool production are linked not only with family legacy but also with livelihood. Historically, the livelihood of Navajo families depended on large flocks with thousands of sheep:

My family were sheep people for many, many generations. I remember my grandfather having close to 1,000 head of sheep at one time. We grew up like that. Knowing what it is, knowing the stories that happen with all that, the teachings that happen with that kind of culture; that is my interest. (14)

Participants recalled ways that their agro-pastoral heritage in general had meant independence for Navajo families. Parents and grandparents had taught that sheep meant independence:

The way he [grandfather] put it was that the sheep will always be there for you. No matter what. Through thick and thin the sheep will be there for you. A job can disappear years down the road. The sheep will still be there for you. (09)

My mother taught me that. She says, “My parents told me without sheep, not to ever let go of the sheep, because without sheep there’s no stability in your life. You don’t have that strength to survive.” (01)

The Navajo sheep culture had provided not only opportunities for independence, but a means to educate children about life. Raising Navajo-Churro sheep provides a conduit for learning, a way to teach children about life relationships and responsibility:

We understand that this is a powerful tool to use for future generations of kids and how we teach them. You can do lessons on sheep. When you focus on that sheep, how does that relate to relationships with the elders? How does that relate to the youth? The sheep is the vehicle to talking about the deeper issues, which is the culture and the language. (14)

I was coming from a traditional home—especially with my mother not receiving education because of sheep—listening to her when she talks about sheep, how it’s a learning tool for everything from science and math, how she ties that in. (01)

When Navajo people taught children about life relationships through the sheep, they also had the opportunity to influence their families. Restoring Navajo-Churro sheep to Navajo families could strengthen family relationships. A participant whose family received sheep from the NSP discovered that:

You kind of re-meet your own family, too, in the process. Prior to this we had a lot of family dysfunction as a lot of Navajo have. We have been through sheep reductions, the alcoholism, all the things that you can think of families going through. We feel that focusing on this project in terms of bringing the sheep back to our own family has been a healing process. (14)

In traditional Navajo families, women owned the sheep, and their economic influence diminished when the sheep were destroyed or devalued. Returning Navajo-Churro appears to reinforce the matrilineal quality of Navajo culture:

For a long time there, we only wanted a women’s board. . . We thought it was important to have women as the leaders in this little group of people. I think it was a significant thing. When you begin to bring back sheep, this is the matrilineal culture that is coming back. (14)

When DBI opened its governing boards to men, they acknowledged the male weavers among them. A male weaver described a smooth transition: “I was the first male individual that was part of the group. That didn’t bother me. I was well accepted.” (01)

A connection emerged between restoring the Navajo-Churro and the persistence of the Navajo language. “These animals are still part of this culture, and that’s what’s going to keep the culture together and bring the language back,” (14) explained one of the first DBI members. Younger participant found that returning Navajo-Churro sheep to their families had encouraged speaking the Navajo language:

Since I've been with DBI, I've gotten to know a lot more elders with the knowledge about the sheep, the wool, the weaving. I sit down with my elders—my grandparents, my aunts, my uncles—and ask them. My Navajo speaking is more fluent now that I get to talk to them. I have an accent now! (02)

I have had a chance to practice my Navajo language skills, especially talking with the elders about sheep. I had only spoken Navajo with my parents at home, and, going away to college, I didn't have much opportunity to speak Navajo. (08)

Data revealed a second theme that indicates Navajo artisans in this study imbue with cultural meaning the process of using Navajo-Churro fleece and the products made from Navajo-Churro fleece. In particular, artisans value the natural colors and fiber characteristics. Navajo-Churro sheep also offer opportunities to add value to wool and textiles and to encourage social interactions among artisans and within families.

Participants in the study who are weavers particularly tend to value the natural colors:

I wove, but I used commercial colors. Then one day my older sister. . . introduced me to this wool. Oh, wow! This is so beautiful, and it's natural. I just fell in love with it. (07)

I would like to specialize in brown sheep, tan sheep, rust colored sheep. I want to be able to breed this certain various colors of brown. I want to be known for that. (07)

Of particular interest in this study were references to small flocks of Navajo-Churro sheep that weavers generations back had refused to interbreed; they had kept Navajo-Churro for their natural colors.

Wool processing techniques and knowledge had been lost among many of the Navajo artisans in this study. At DBI events, Navajo artisans who had learned to work with wool from introduced breeds had re-learned ways to work with Navajo-Churro wool:

After DBI, I got to know the processing, what you need to do, how to go about it, all that stuff I got to know. (02)

I don't have to card it [Navajo-Churro fleece]. You just go straight to spinning. They did this 400 years ago. There were no carders around, so they had to breed them for that quality of wool so they don't have to card any. (08)

The potential for Navajo-Churro to add value to Navajo weaving also influences attitudes about working with the fleece and wool. Wool production and prices paid for wool had plummeted during the last decades of the twentieth century. Wool from reservation sheep sold for five or six cents a pound at the time of this study, if a buyer could be found. Reservation sheep wool in general is too coarse for commercial woolen mills and unsuitable for much of the textile handcraft markets on or off the reservation. Navajo-Churro wool could add value to wool and weaving. Weavers who understood and had connected with markets for rugs woven with Navajo-Churro wool charge at least two times more for handspun, natural color weaving:

My handspun sells for more, brings in more money than the commercial spun. Collectors out there know what they're doing. When they see something handspun, they gravitate to it. (08)

We've educated some of the people out there. They know what to do with their wool. People wanted to know how to prepare the wool, that Churro sheep wool is worth more than the other wool. (02)

The belief has emerged that Navajo-Churro can be worth more by developing and marketing value-added products.

In the past, the labor required for shearing sheep and processing wool had brought people on the reservation together; many hands shared the work. Family stories about that social interaction led DBI members to initiate gatherings focused on wool processing and weaving. Labor-intensive wool processing encourages social interaction:

Getting to know other weavers and wool growers—that's a social life. (04)

If you work as a group, it's better because you're too busy talking and socializing with the others there that you don't notice the work that you do. It's more of a group effort so you don't feel like you're the only one doing this. (03)

Family interaction was emphasized as a category of social interaction. Processing, spinning, and weaving appear to encourage social interaction within families:

I know a few of my community members; they are into getting their children involved in learning about sheep and about the wool production. (07)

We are trying to get a lot of mother and daughter communication with helping each other. We don't really have that. The kids would rather just stay home and watch TV, but the mom can invite the daughter or son. We try to get people to come as a family. (05)

The two themes of cultural identity and cultural product have revealed linkages among a traditional fiber resource, cultural identity, and textile production. Case studies among other indigenous artisans indicate similar relationships between artisans and traditional fiber resources. For example, the women weavers in Chiapas, Mexico, whose local sheep were crossbred with improved sheep breeds resisted using the crossbred wool.²⁰ Cambodian silk weavers, who lost their local variety of silkworms during war, found that introduced silkworm varieties failed to adapt well to their climate.²¹

Restoring Navajo-Churro sheep offers Navajo artisans the choice of a traditional fiber resource deeply linked with their cultural identity—and to their cultural products. Although Navajo-Churro wool accounts for a small percentage of fiber used to make Navajo textiles, results from this study argue for careful consideration of the cultural meaning of raw materials, especially traditional fiber resources, when making decisions about development intervention strategies intended to sustain artisans and textile handcraft production.

Bibliography

Bailey, Gale, and Roberta G. Bailey. *A History of the Navajos: The Reservation Years* Santa Fe, NM: School of American Research Press, 1986.

²⁰ T. Gomez, H. Castro, and R. Perezgrovas, "The Real Sheep of the Tzotzil Shepherdesses," *Compas Magazine for Endogenous Development* (2001): 29-31; Donna Muller, "The Sacred Sheep of Chiapas," *Spin-Off* 23 (1999, Spring): 80-85.

²¹ M. Kikuo. "In a Cambodian Village: Traces of the War in Textiles." The Institute for Khmer Traditional Textiles Web site (Retrieved July 14, 2004): <http://iktt.esprit-libre.org>.

- Bailey, Lynn. R. *If You Take My Sheep—: The Evolution and Conflicts of Navajo Pastoralism, 1630-1868*. Pasadena, CA: Westernlore Publications, 1980.
- Blunn, Cecil T. "Improvement of the Navajo Sheep." *The Journal of Heredity* 31 (1940, March): 98-112.
- Blunn, Cecil T. "Characteristics and Production of Old-Type Navajo Sheep." *The Journal of Heredity* 34 (1943, May): 141-152.
- Gomez, T., H. Castro, and R. Perezgrovas. "The Real Sheep of the Tzotzil Shepherdesses." *Compas Magazine for Endogenous Development* (2001): 29-31.
- Grandstaff, James O. *Wool Characteristics in Relation to Navajo Weaving*. Washington, DC: US Department of Agriculture, 1942.
- Hedlund, Ann Lane. "Commercial Materials in Modern Navajo Rugs." *American Indian Art Magazine* (2003, Summer): 44-55.
- Kikuo, M. "In a Cambodian Village: Traces of the War in Textiles." The Institute for Khmer Traditional Textiles Web site (Retrieved July 14, 2004): <http://iktt.esprit-libre.org>
- Köhler-Rollefson, Ilse. "Community-Based Management of Animal Genetic Resources—with Special Reference to Pastoralists." *Community-based management of animal genetic resources: Proceedings of the Workshop Held in Mbabane, Swaziland*. (May, 2001): 13-26.
- Lincoln, Yvonne S., and E. G. Guba. *Naturalistic Inquiry*. Beverly Hills, CA: Sage, 1985.
- McNeal, Lyle (Ed.). *Wool on a Small Scale*. Logan, UT: Utah State University, 1986.
- Muller, Donna. "The Sacred Sheep of Chiapas." *Spin-Off* 23 (1999, Spring): 80-85.
- Navajo-Churro Sheep Association. Web site (Retrieved July 11, 2004): <http://www.navajo-churrosheep.com>
- Reichard, Gladys. *Spider Woman*. New York: Macmillan, 1934.
- Spononberg, D. P., and Donald E. Bixby. "Rare Sheep Breeds." In *Handspun Treasures from Rare Wools*. Loveland, CO: Interweave Press, 2000.
- Wheat, Joe Ben. *Blanket Weaving of the Southwest*. Tucson: University of Arizona Press, 2003.