Restoring Navajo-Churro sheep: community-based influences on a traditional Navajo fiber resource and textile

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Restoring Navajo-Churro sheep:
Community-based influences on a traditional Navajo fiber resource and textile

by

Susan Marie Strawn

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Textiles and Clothing
Program of Study Committee:
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Iowa State University
Ames, Iowa
2004

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I am indebted to the participants in this study and to others associated with Diné be'iiiná for sharing their time and experiences. It is my hope that this dissertation rewards their generosity by raising awareness about Diné be'iiná and Navajo-Churro sheep. My research could not have proceeded in a timely way without support from Ann Lane Hedlund, who encouraged my dissertation topic, Ronald Maldonado, who facilitated research permits on the Navajo Nation, and Suzanne Jamison, who provided invaluable information about Diné be'iiná. I thank Deborah Robson, former editor of “Spin-Off” magazine, for introducing me to Diné be'iiná.

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My son Chris inspired my determination to achieve this degree. Norma Wolff provided friendship and scholarly perspective on my work. Susan Torntore gave me the insights of a recent doctoral graduate. Carol Hall shared conversations and companionship through our graduate research, and Emmy Shakeshaft donated her time to proofread my dissertation. I thank the College of Family and Consumer Sciences at Iowa State University and the American Association of Family and Consumer Sciences for their financial support.
Factors that contribute to artisan sustainability are of critical importance to the world’s artisans who depend on hand-produced textiles for income and livelihood, and for whom textile production is closely intertwined with cultural identity. Navajo weavers have processed and woven the wool of Navajo-Churro sheep into textiles for more than 350 years. Navajo-Churro sheep, destroyed to reduce over grazing and crossbred to near extinction, are being restored to the Navajo Nation. The purpose of this study is to document and interpret ways that the community-based Navajo organization Diné be’iiiná (The Navajo Lifeway, or DBI) influences the restoration of Navajo-Churro sheep as a traditional fiber resource used for Navajo textiles. The relationship of Navajo-Churro sheep and wool to Navajo history and textiles provides context for this interpretive study. Models for community-based development provide the conceptual framework. Change in textile handraft traditions grounds the theoretical base. Data emerge from participant-observation, in-depth interviews conducted on or near the Navajo Nation, and related contemporary and historic sources. Results define relationships among Navajo-Churro sheep and wool, Navajo cultural identity, unique cultural products, and the educational channels used to promote knowledge of Navajo-Churro sheep. Results identify factors that contribute to sustaining DBI as a community-based organization. An inductively-derived model proposed for sustaining Navajo-Churro sheep and wool as a traditional fiber resource furthers the understanding of community-based strategies that contribute to artisan sustainability.
CHAPTER ONE: INTRODUCTION

Civilization is a stream with banks. The stream is sometimes filled with blood from people killing, stealing, shouting and doing things historians usually record, while on the banks, unnoticed, people build homes, make love, raise children, sing songs, write poetry.

The story of civilization is what happened on the banks.

Will Durant

Understanding factors that contribute to artisan sustainability is of critical importance to the world’s artisans who depend on hand-produced textiles for their economic livelihood and for whom textile production is closely intertwined with cultural identity. Scholars and development organizations argue the relative merits of factors used to assess progress toward sustainable development. Raw materials available to artisans, in particular traditional fiber resources with multi-generational links to cultural identity, are one factor with the potential to influence sustainable development for artisans. Empirical evidence about fiber resources can inform arguments about development intervention strategies for artisan sustainability.

Much of the previous research about artisans in the field of textiles and clothing has concentrated on business skills and product development, emphasizing global market profitability and artisan empowerment (Littrell & Dickson, 1999). The research for this dissertation explores development intervention at the level of a raw material, specifically the wool of the ‘old-type’ Navajo sheep, known today as the Navajo-Churro breed.¹ Wool from

¹ The literature includes references to ‘old-type’ Navajo sheep, ‘Navajo’ sheep, Churro sheep, Spanish Churro sheep, and Navajo-Churro sheep. Breed standards were developed and the name Navajo-Churro was selected for these sheep in 1986. To minimize confusion, in this dissertation the term Navajo-Churro sheep refers to ‘old type’ Navajo sheep, ‘Navajo’ sheep, Churro sheep, and the Navajo-Churro breed.
Navajo-Churro sheep has been available to Navajo artisans since the 1500s and is considered a traditional fiber resource. In common usage, the Navajo people apply the term 'traditional' to the practice of adhering to long-established customs and beliefs as precedents handed down through the generations within Navajo culture. Research for this study focuses on Diné be’iiiná, Inc. ² (abbreviated as DBI, translated as The Navajo Lifeway), a community-based Navajo organization that seeks to restore Navajo-Churro sheep and wool to Navajo lands and people. This study provides a unique opportunity to explore wool from Navajo-Churro sheep as one factor of artisan sustainability and to delineate ways that a community-based organization influences the restoration of a traditional fiber resource and its use for textiles.

Research Topics

Research for this dissertation emerges from three inter-related research topics. The relationship of Navajo-Churro sheep and wool to Navajo culture and textiles grounds the study. Models for community-based sustainable development, in particular models elaborated by Chambers (1983, 1997) and Sen (1993, 1997), direct the content of interview documents and interpretation of findings. Theory on tradition and change in textile handcrafts provides a base for understanding the impact of a traditional fiber resource as a factor of intervention on artisan sustainability.

Navajo-Churro Sheep and Wool

Navajo-Churro sheep have provided a traditional fiber resource for Navajo fiber arts, especially weaving. The Navajo people obtained sheep from sixteenth century Spanish

---

² Placement and type of diacritical marks vary in different sources. The diacritical marks used in this dissertation are those used in the DBI Articles of Incorporation. According to Navajo linguist Dr. Ellafina Perkins, Diné be’iiiná indicates the correct marks for glottal stops (Personal communication, September 10, 2004).
explorers who introduced Spanish Churro sheep into the American Southwest. Succeeding
generations of these hardy desert sheep evolved into the ‘old-type’ Navajo sheep, an
indigenous or ‘local’ domesticated livestock that thrived in the high desert environment
(Blunn, 1943; N-CSA, 2004; Ryder, 1997; Sponenberg & Bixby, 2000). The Navajo people
adopted an independent livelihood, pastoral lifeway, and weaving based on Navajo-Churro
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
(Bailey, 1980; Wheat, 2003).

Over time, the opportunity to work with Navajo-Churro wool slipped away from
Navajo artisans (Bailey & Bailey, 1986; Wheat, 2003). In the 1860s, Navajo-Churro sheep
were destroyed as part of federal policy to subdue and displace the Navajo people. When the
Navajos returned to their homelands, many of the remaining Navajo-Churro were crossbred
with ‘improved’ (high production) breeds introduced onto the reservation. Federal policy
during the first half of the twentieth century mandated reduction of sheep on Navajo lands for
overgrazing. Destruction and cross breeding reduced Navajo-Churro sheep from countless
thousands observed during the mid-nineteenth century to near extinction (Bailey & Bailey,
1986; Blunn, 1940, 1943; Boyce, 1974; Grandstaff, 1942; McNeal, 1986). By the 1970s, the
American Livestock Breeds Conservancy (ALBC) estimated no more than 450 Navajo-

3 The term ‘improved’ breed refers to domesticated livestock that have been bred for
high productivity in a controlled environment (Köhler-Rollefson, 2001). ‘Improved’ sheep
breeds—Merino and Rambouillet, for example—have been selectively bred to weigh more
and yield a heavier coat of fine, white fleece favored by off-reservation commercial markets.

4 The ALBC is a non-profit organization with a mission to protect nearly 100 breeds of
domesticated livestock from extinction.
Beginning in the 1970s, the coordinated efforts of Navajo and non-Navajo individuals and organizations have restored Navajo-Churro sheep to Navajo lands and people, and to consumer handcraft markets. Foremost among these, the Navajo Sheep Project (NSP) at Utah State University established breeding lines of Navajo-Churro sheep from 'old-type' Navajo sheep located and purchased from isolated regions of the reservation. The NSP donated Navajo-Churro sheep from their flocks to sheep herding families selected on the Navajo Nation (McNeal, 1986). Fiber handcraft and wool specialists established the Navajo-Churro Sheep Association (N-CSA) in 1986 using breed standards delineated by the ALBC. By 2003, the N-CSA listed over 2,500 registered Navajo-Churro sheep in North America. In 1991, the Navajo Sheep Project served as the umbrella organization for founding Diné be'iiiná (DBI) as a nonprofit, community-based organization with a major focus on restoring Navajo-Churro sheep to Navajo lands and people (Articles of Incorporation, 2001; By-laws, 2003; ALBC, 2004; Diné be'iiiná, 2004; N-CSA, 2004).

*Sustainable Development*

Introduction of the phrase 'sustainable development' in 1987 reflected the growing concern among development organizations about long-term environmental stress, including the depletion of genetic diversity (WCED, 1987). Sustainable development emphasizes long-range, multidimensional relationships between human activities and the ecosystem (Hodge, 1997). Research and publications about sustainable development, however, have tended to emphasize the economic impact on developing nations. At an international scale, development organizations are increasingly concerned that the emphasis on economic indicators alone will not provide an adequate assessment of progress toward sustainability.
(Bergh & Straaten, 1994; Hodge, 1997). These organizations call for a more comprehensive view of factors that influence and sustain development intervention:

At the heart of this appeal is a concern regarding the current emphasis on economic signals in assessing societal progress in the absence of a context that links to ecological and human well-being. In short economic analyses that do not take into account the full environmental and human costs have led to detrimental, even life-threatening, policies, decisions, and actions (Hodge, 1997, p. 5).

The models used in this study address this concern and adopt a broader concept of sustainability (Chambers 1983, 1997; Köhler-Rollefson, 2001; Sen, 1993, 1997). This approach shifts from top-down, dominant culture development models to community-based models of sustainability, from “things and infrastructure to people and capabilities” (Chambers, 1997, p. 9).

Traditional Handcrafted Textiles

Development intervention among artisans often leads to concern about the impact of intervention on tradition and change in handcrafted textiles. To fully assess the influence of Navajo-Churro wool as a traditional fiber resource, it is important to understand more than its technical application to Navajo textiles. Equally if not more important is an understanding of the role that tradition and change play in Navajo textiles over time.

Definitions and attitudes toward tradition and change vary among scholars. One extreme view of traditional art objects insists that colors, designs, techniques, and raw materials used for handcrafted textiles remain static through generations of artisans (Goin, 1993). The majority of scholars, however, challenge this interpretation in favor of a more flexible view of tradition as a social construction linked with invention and economic realities. Within this framework, change emerges as one component of tradition. Artisans adapt new ideas, colors, techniques, and raw materials into the handcrafted textiles associated
with their cultural identity (Baizerman, 1987; Graburn, 1976; Hobsbawm & Ranger, 1983; Littrell & Dickson, 1999).

**Research Questions**

Studying ways that DBI influences the restoration of Navajo-Churro sheep and wool raises research questions.

- What are the compelling reasons for restoring Navajo-Churro wool as a traditional fiber resource for Navajo fiber artisans?

- Which roles does Navajo-Churro wool play in sustaining traditional Navajo textiles, both for Navajo artisans and in non-Navajo consumer markets?

- What factors link Navajo-Churro sheep and wool with cultural identity?

- What characteristics of Navajo-Churro wool do Navajo artisans use to define it as a cultural product?

- What educational channels has DBI used to restore Navajo-Churro sheep and wool to Navajo artisans and to the non-Navajo consumer market?

- What factors contribute to sustaining DBI as a community-based organization?

Exploring these questions may contribute to an understanding of the cultural meaning and economic benefit of Navajo-Churro sheep and wool among contemporary Navajo fiber artisans.

The over-arching purpose of this study is to describe inductively Navajo-Churro wool as a traditional fiber resource and factor of intervention for sustaining Navajo artisans. Specifically, this study seeks to develop an inductively-derived model that will describe relationships among (1) Navajo-Churro wool as a traditional fiber resource and as a cultural product linked with Navajo cultural identity, (2) a community-based organization that seeks to restore Navajo-Churro sheep and wool to Navajo artisans, (3) educational channels used to
convey knowledge of Navajo-Churro sheep and wool, and (4) factors that sustain DBI as a community-based organization.

This study uses an interpretive (naturalistic) research design, defined as an inductive research process conducted in a natural setting. Interpretive research is appropriate for studies that attempt to see the world from the viewpoint of people who participate in the study and to capture ways that people construct meanings and define their world (Lincoln & Guba, 1985). Participant observation, document analysis, supporting interviews and in-depth interviews with participants provide qualitative data for analysis and reporting (Glaser, 1992; Glaser & Strauss, 1967). Triangulating multiple data sources establishes validity for this study; consistent transcription of interviews, observational field notes, establishment of inter-rater reliability, and participant member checks contribute to reliability (Lincoln & Guba, 1985).

Objectives

This study explores and interprets factors related to artisan sustainability. These factors include the cultural relevance of a traditional fiber resource, community-based models for sustainable development, and a consideration of change among traditional handcrafted textiles. Findings from this study will:

1) Contribute to core knowledge about the influence of restoring Navajo-Churro sheep and wool to Navajo artisans,

2) Identify roles Navajo-Churro sheep and wool play in Navajo artisan sustainability,

3) Contribute to an understanding of the aspects of Navajo cultural identity linked with Navajo-Churro sheep and wool,

4) Suggest characteristics of Navajo-Churro wool that define it as a cultural product,
5) Describe educational channels that DBI uses to transfer knowledge about Navajo-Churro sheep and wool to Navajo artisans and to non-Navajo consumer markets,

6) Describe demographics and activities of DBI at the time of the study,

7) Identify factors that sustain DBI as a community-based Navajo organization,

8) Generate an inductively derived model for sustaining Navajo-Churro wool as a traditional fiber resource, and

9) Contribute to literature on Navajo-Churro sheep and wool, community-based sustainable development, and tradition and change in handcrafted textiles.

Organization of the Dissertation

This dissertation is organized in six chapters. Chapter One has introduced the justification for the study. Chapter Two reviews literature relevant to three broad fields of research interests that initiated the study: Navajo-Churro sheep and wool, sustainable development, and tradition and change in handcrafted textiles. Chapter Three describes the context for the study, specifically an historical overview and demographics pertinent to the Navajo Nation and Diné be' iiná at the time of the study. Chapter Four describes research methods. Chapter Five conveys results of data analysis, including emergent themes and a proposed model for sustaining Navajo-Churro wool as a traditional fiber resource. Chapter Six discusses contributions of research findings to existing literature, suggests applications for community-based sustainable development, recommends opportunities for further research, and summarizes the study.
## Definition of Terms

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<tr>
<td>Anglo-American</td>
<td>English-speaking white Americans.</td>
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<tr>
<td>Athapaskan</td>
<td>Member of the Athapaskan linguistic family of North American Indians, including Navajo and Apache (Webster's New International Dictionary, 1957).</td>
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<tr>
<td>Bayeta</td>
<td>Wool unraveled from dyed, red wool flannel (Hecht, 2001).</td>
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<td>Biodiversity</td>
<td>Shortened term for biological diversity; “All of the hereditary variation in organisms, from differences in ecosystems to the species composing each ecosystem, thence to the genetic variation in each of the species” (Wilson, 2002, p. 213).</td>
</tr>
<tr>
<td>Churro</td>
<td>Term used to refer to either the ‘old-type’ Navajo sheep or Navajo-Churro sheep; a corrupted version of Churra, the Andalusian breed of desert sheep introduced into North America by early Spanish explorers (Wheat, 2003).</td>
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<tr>
<td>Coat</td>
<td>Includes the outer coat, inner coat, and kemp on sheep or other wool breeds.</td>
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<tr>
<td>Crimp</td>
<td>“Waves, bends, twists, coils, or curls along the length of the fiber” (Kadolph &amp; Langford, 1998, p. 20).</td>
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<tr>
<td>Cultural products</td>
<td>“... encompass goods that are produced exclusively by hand as well as those that incorporate extensive mechanization. Using this terminology, cultural products include what are typically called handcrafts as well as other items on a higher ratio of machine-to-hand production” (Littrell &amp; Dickson, 1999, p. 4).</td>
</tr>
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<td>Diné</td>
<td>Navajo term used to refer to themselves as ‘the people’.</td>
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<td>Feral</td>
<td>Refers to a domesticated animal that escaped and is living wild (Waite, 1994).</td>
</tr>
<tr>
<td>Fleece</td>
<td>“Wool sheared from sheep or other animals in the wool class. The term is especially used for the entire coat of wool shorn from sheep at one time” (Wingate, 1979, p. 244).</td>
</tr>
<tr>
<td>Improved breed</td>
<td>Refers to a livestock breed characterized by high production within a controlled environment (Köhler-Rollefson, 2001)</td>
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Kemp

Short, coarse, straight hair fiber with unevenly developed medulla that causes uneven dyeing (Wingate, 1979).

Livelihood

Access to adequate tangible and intangible assets for basic needs (Chambers, 1997).

Medullated fiber


Natural colors

Refers to colors in the natural state, “undyed or unbleached” (Wingate, 1979, p. 410).

‘Old-type’ Navajo sheep

Descendents of the Spanish Churro sheep; ancestors of the Navajo-Churro breed.

Sheep is Life Celebration

Annual gathering sponsored by DBI to promote Navajo-Churro sheep and the Navajo sheep culture.

Species

“A group of animals whose members freely mate with each other and produce fertile offspring” (Geerlings, Mathias, & Köhler-Rollefson, 2002, p. 4).

Spinning


Staple length

Lengthwise measure of fiber.

Sustainable

“Ability to maintain or improve a level of living and quality of life, including managing stress and shocks” (Chambers, 1997, p. 170).

Synthetic dyes

“A class of complex compounds, nearly all derived from one of the five hydrocarbons obtained from coal tar” (Wingate, 1979, p. 597).

Traditional

In common usage, the Navajo people apply the term ‘traditional’ to the practice of adhering to long-established customs and beliefs as precedents handed down through the generations within Navajo culture.

Transhumance

Practice of moving livestock between different grazing lands according to season (Oswalt, 2002).

Weaving

Process of producing a fabric by interlacing two or more yarns at right angles (Kadolph & Langford, 1998, p. 410).
| **Well-being** | Mental, spiritual, social, and material experiences of good quality of life (Chambers, 1997) |
| **Western** | In common usage, refers to methods derived from the scientific method, especially those learned from Anglo educational institutions. |
| **Wool** | “Refers to fiber from various animals, including sheep, Angora and cashmere goats, camel, alpaca, and llama” (Kadolph & Langford, 1998, p. 411); distinguished from kemp by its overlapping scales that allow wool to felt (Wingate, 1979); Navajo weavers also use the term as synonymous with hand carded, handspun wool yarn (Hedlund, 2003). |
| **Yarn** | “Assemblage of fibers twisted or laid together so as to form a continuous strand that can be made into a textile fabric” (Kadolph & Langford, 1998, p. 411); Navajo weavers also apply the term to commercially spun wool (Hedlund, 2003). |
CHAPTER TWO: LITERATURE REVIEW

An interpretive study about the influence of a traditional fiber resource on artisan sustainability requires a review of relevant literature that places the study within the context of existing scholarship. Both chapters Two and Three provide contextual background for this study. Chapter Three will describe historical context and contemporary demographics about the Navajo Nation and Diné be’iiiná (DBI). In Chapter Two, literature from the three broad fields of research interest that initiated the study are selectively reviewed: (1) Navajo-Churro sheep and wool, (2) sustainable development, and (3) tradition and change in handcrafted textiles. The first section of this chapter begins with a review of literature that explores Navajo-Churro sheep as a ‘local’ livestock breed and that traces the use of Navajo-Churro wool for Navajo textiles. The second section of this chapter describes models for community-based sustainable development that contribute to the organization of research methods and analysis of data. The third section discusses theory related to tradition and change in handcrafted textiles, including influences on traditional Navajo textiles, and provides conceptual grounding for the study. A summary concludes the chapter.

The Navajo people are among the most studied populations in the world. Academic research, legal documentation, tourism, and popular interest in Navajo culture and art have generated a massive body of literature about the Navajo people. Of necessity, this review of literature selects references to Navajo-Churro sheep and wool that appear most salient to the study topic.

Navajo-Churro Sheep and Wool

Domesticated sheep are closely intertwined with the history, cultural identity, economy, and textiles of the Navajo people. Sheep have meant warmth from wool and pelts,
food from mutton, and cash from selling fleece, meat, and textiles. Sheep have also meant social cohesion in a pastoral, matrilineal society. Over time, the sheep owned by Navajo people have included the Navajo-Churro, various sheep breeds introduced onto Navajo lands, and the resulting crossbred sheep.

Navajo-Churro sheep, however, hold special significance for Navajo culture and textiles. They have historical importance as the first sheep obtained by the Navajos from the Spanish and ecological importance for their adaptation to the arid environment of the Navajo Nation. Navajo origin stories describe Navajo-Churro sheep as sacred animals given to the Navajos by their Holy People (Reichard, 1934). In addition, generations of Navajo artisans have used Navajo-Churro fleece to make textiles. The establishment of the Navajo-Churro Sheep Association (N-CSA) in 1986 acknowledged Navajo-Churro sheep as a distinct breed (N-CSA, 2004).

The story of the Navajo-Churro—from the earliest domestication of sheep to restoration of a traditional local breed—is closely intertwined with the history, ecology, and culture of the Navajo people. This section provides background information about Navajo-Churro sheep as a ‘local’ breed, describes distinctive characteristics of the breed, and specifies fiber characteristics that make Navajo-Churro wool well suited for Navajo textiles.

Sheep Breeds and Domestication

Sheep and goats were the first species of domestic livestock. Archaeological evidence, skin-working tools in particular, indicate that humans first domesticated sheep around 9,000 BCE (the Neolithic period) in the Near East (Köhler-Rollefson, 2001; Ryder, 1996).

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1 The Navajo-Churro Sheep Association breed standard and breed points are described at http://www.navajo-churrosheep.com/breedstandard.htm
Argali sheep, a variety that originated in central Asia, contributed to the characteristics of domestic sheep that adapted to the harsh climates of India, Mesopotamia, Egypt, and Asia Minor. Greek and Phoenician traders introduced into Iberia a variety of desert sheep, the ancestors of the Churro (Bailey, 1980). Over millennia, breeds emerged through the process of domestication.

The notion of 'breed' is a slippery concept. A classic definition of a breed describes animals that resemble one another and pass along certain traits through selection and adaptation (OSU, 2004). A more comprehensive definition, however, acknowledges the social and ecological components of the concept of breed:

A domestic animal population may be regarded as a breed, if the animals fulfil (sic) the criteria of (i) being subjected to a common utilization pattern, (ii) sharing a common habitat/distribution area, (iii) representing largely a closed gene pool, and (iv) being regarded as distinct by their breeders (Köhler-Rollefson, 2001, p. 14).

During the past 10,000 years, approximately 6,000 domestic livestock and poultry breeds in the world have been developed from fewer than 40 wild species (FAO, 2000; Geerlings, Mathias, & Köhler-Rollefson, 2002). Among domestic sheep, 920 breeds are recorded in the Food and Agriculture Organization (FAO) Global Databank for Animal Genetic Resources, and 119 breeds of sheep (18.1%) are considered at risk for survival. In North America, 204 domestic sheep breeds are recorded, and 59 (28.9%) are at risk (1999).

The FAO projects that more than 2,000 domestic animal breeds will be lost within 20 years, given the current rate of extinction (2000). Data from a survey by the FAO Information System on Domestic Animal Diversity (DAD) classified the risk status of Navajo-Churro sheep as endangered (2004). At the time of this study, the American

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2 The Food and Agriculture Organization, an arm of the United Nations, is a leader in acquiring and disseminating information about conservation efforts for local breeds.
Livestock Breeds Conservancy (ALBC)\(^3\) designated Navajo-Churro sheep as rare, a category defined as an “estimated fewer than 1,000 annual North American registrations and estimated fewer than 5,000 global population” (2004).

‘Local’ Breeds

‘Local’ breeds occupy a valuable niche among domestic livestock. Through selective breeding of domesticated livestock breeds from wild species, humans have bred animals that exhibit traits considered beneficial within their environment and culture. In the past, the majority of domestic breeds were associated with specific environments and cultures. These ‘local’ livestock breeds adapt well to regional climates and vegetation, develop disease resistance, and make the most efficient use of resources in the marginal environments that account for two-thirds of the world’s land surface. Yakut horses in Siberia, for example, can graze on pastures two feet deep in snow, and Sanga cattle in South Africa are resistant to the ticks that spread East Coast Fever. Long-adapted local breeds are also less dependent on outside food and health care resources, traits that help insulate local producers from outside market fluctuations. In addition, studies have indicated that women often prefer traditional, local breeds to improved breeds because well-adapted, disease-resistant traditional breeds require less maintenance (Geerlings, et al., 2002; Köhler-Rollefson, 2001).

During the twentieth century, however, the emphasis on breed diversification and local breeds was reversed. Instead of encouraging the local management of diverse breeds, agricultural methods promoted a smaller number of high-performance ‘improved’\(^4\) breeds,

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\(^3\) The non-profit organization ALBC strives to protect domestic livestock breeds.

\(^4\) An ‘improved’ breed exhibits high productivity in a controlled environment. "Improved" sheep breeds—Merino or Rambouillet, for example—have been selectively bred to weigh more and yield a heavier coat of fine, white fleece required by commercial markets.
considered economically superior for their ability to achieve higher production within
controlled environments (Heise & Christman, 1989; Köhler-Rollefson, 2001; Sponenberg &
Bixby, 2000). Pressure to adopt improved breeds in place of local breeds, coupled with the
loss of cultural diversity and traditional livelihoods, has driven this major shift in agricultural
production.

The survival of local breeds is endangered by agricultural production and marketing
strategies that encourage raising a few improved 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 (Sponenberg
& Bixby, 2000, p. 17).

Environmental concern about the loss of biodiversity appears directed toward endangered
wild species (RNCE, 1993). The loss of biodiversity among livestock breeds attracts less
attention (Robson, 2000; Vietmeyer, 1983). The Navajo Sheep Project (NSP) at Utah State
University, however, publicized the endangered status of Navajo-Churro sheep in brochures,
newspapers, magazines, and Internet sites. The Library of the Museum of New Mexico
Museum of Indian Arts and Culture Laboratory of Anthropology in Santa Fe, New Mexico,
holds a file with articles documenting publicity about Dr. McNeal’s work with Navajo-
Churro sheep and the NSP. In addition, “Spin-Off” magazine, a crafts publication for hand
spinners sensitive to working with a range of fiber resources, included periodic updates on
the NSP (Alderman, 1984; McNeal, 1984; Robson, 1996). Interestingly, the loss of breed
diversity has been linked with loss of linguistic diversity. The World Wide Fund for Nature
(WWF) reports the disappearance of more than 600 languages during the past 150 years, a pattern that reflects the loss of local domestic livestock breeds (2000). A culture that loses its language may also lose traditional knowledge about local breeds (Geerlings et al., 2002).

**Navajo-Churro Sheep as a Local Breed**

Navajo-Churro sheep exemplify a local breed well adapted to a specific environment. Through natural selection, Navajo-Churro sheep developed into a local breed that could subsist in the harsh range and climatic conditions of the Navajo Nation. Navajo-Churro sheep have unique physical and physiological characteristics different from those of improved breeds. Improved sheep are bred for wide bodies, short legs, and heavy bones to support greater weight and wool yield in controlled environments. Navajo-Churro sheep, in contrast, have narrow bodies, long legs, and light bones that are adaptations for walking the long distances required to graze on arid lands. Faces, legs, and bellies have little fleece to snag on spines and prickles of desert plants (Appendix K). The relatively smaller size of the Navajo-Churro is another advantage in a land with scarce vegetation; an average mature ewe weighs 100 pounds (45 kg), an average ram 160 pounds (72 kg) (N-CSA, 2004). Known for high fecundity, Navajo-Churro ewes mature early, lamb relatively easily, often produce twins and triplets, and protect their lambs aggressively. Navajo-Churro sheep also tend to be disease resistant (Blunn, 1943; Heise & Christman, 1989; N-CSA, 2004).

**Navajo-Churro fleece.** Over millennia, the texture of domestic sheep fleece in general has changed through adaptation and selective breeding. For one thing, fleece evolved from that of a molting coat harvested by pulling to a coat with continuous growth that must
be shorn. For another, fiber qualities changed. The outer coat of coarse hair fibers characteristic of unimproved sheep has decreased; the inner coat of fine, soft wool fibers characteristic of improved sheep has increased—from 15 microns in wild sheep to a typical value of 20 microns for fine wool (Ryder, 1997). Although the Navajo-Churro coat grows continuously and must be shorn, it has retained the double coat (outer coarse hair fibers and inner fine wool fibers) and kemp fibers of unimproved sheep breeds (Blunn, 1940, 1943; Grandstaff, 1942; Phillips, 1941). The wool yield from Navajo-Churro sheep is lower in general than that for improved breeds. Fleece at shearing time for a mature Navajo-Churro ewe averages four to five pounds (Heise & Christman, 1989), and that from an improved breed sheep may produce eight to twelve pounds of fleece (Blunn, 1940).

Classified as coarse and open with no defined crimp, the coat of Navajo-Churro sheep includes three fiber types. The characteristic double coat has a protective outer coat of longer hair fibers (35 or more microns in diameter) from six to twelve inches in one year’s growth, and an inner coat of fine wool fibers (10-35 microns) measuring five inches or less in staple length. In addition, the coat has a variable amount of short, opaque kemp fibers (65 or more microns). Fleece quality varies among different Navajo-Churro sheep, depending on the relative amounts of these three fiber types. The Navajo-Churro breed standard calls for the outer coat to comprise 10-20%, the inner coat 80%, and kemp not to exceed 5% of the fleece (N-CSA, 2004). Wool of this type can be easily hand carded and spun into yarn for Navajo weaving, and it lends durability to hand woven textiles (Appendix L). The coat of improved

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5 The terms coat and fleece are used interchangeably here, although fleece often refers to a coat that has been shorn.
and crossbred sheep—fine, short-stapled, heavy crimped—is more difficult to hand card and
spin into yarn suitable for Navajo weaving (Bailey, 1980; Reichard, 1936).

The fleece of Navajo-Churro sheep has low grease content. Fleece with less grease repels sand and dust during desert windstorms. Cleaner fleece requires only picking out debris, not washing, an advantage in desert lands where many people must haul water supplies from outside sources to their homes. Cleaner fleece requires less time to prepare wool for spinning, shortening the time required for the weaver to progress from fleece to loom (Blunn, 1940, 1943; Heise & Christman, 1989; Grandstaff, 1942).

Commercial wool producers have selected away from the range of natural colors—creamy white, brown, gray, black, multi-colors—found in wild, feral, and unimproved breeds and toward exclusively white fleece preferred in improved breeds. The preference among consumers and artisans for natural color or white wool depends on both technology and aesthetics. Ryder (1997) has associated breeding for white fleece with progress in dye technology. Although white wool produces the most dramatic results when dyed, colored wools can also be over-dyed; colored wool takes up as much dye as white wool, within a 10% margin. The fiber handcrafts revival of the 1970s renewed popular interest in the colored wool breeds for fiber resources and in the development of a standardized fleece color nomenclature. The complex genetics of coat color has challenged animal scientists, due in

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6 A dominant gene is responsible for white wool, and the gene for black wool dominates that for brown (Ryder, 1990, 1997; Sponenberg & Bixby, 2000). The coats of feral sheep always revert to the natural colors determined by recessive genes; the pattern and tone of natural colors are useful for concealment, another example of adaptation (Ryder, 1980; Smith, Miller, Daniels, & Smith, 1997).
part to the small number of colored wool breeds that remained after mid-twentieth century (Smith et al., 1997).

The range of natural colors of Navajo-Churro fleece—brown, light tan, black, gray, and two or more multi-colors—reflects that of their wild or feral ancestors. The most common color of Navajo-Churro fleece is white, though often with spotted face and legs. Color patterns include piebald and spotted, black and tan, and badgerface (Blunn, 1943; N-CSA, 2004). The registry for the Navajo-Churro Sheep Association uses internationally recognized genetic names to describe birth color and mature color patterns for registered sheep. Weavers have valued the natural colors available in Navajo-Churro fleece, and some regional styles of Navajo weaving—Two Gray Hills and Ganado, for example—are characterized by natural colored wool.

*Navajo-Churro Wool and Navajo Textiles*

It is generally accepted that the Navajo people adopted weaving techniques and the vertical style loom from the Puebloans of the Colorado Plateau (Teague, 1998; Wheat, 2003). The earliest extant fragments of Navajo textiles and the references to Navajo textiles in Spanish documents indicate the fiber used was wool. Archaeological fragments from northern New Mexico date to the mid-eighteenth century and from Canyon de Chelly date from the early nineteenth century. Natural colored wool was combined with commercial, synthetically dyed fibers and yarns by the early nineteenth century (Blomberg, 1988). This section reviews literature about Navajo weaving for references to processing and weaving Navajo textiles with wool from Navajo-Churro sheep.

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7 Adalsteinsson (1970) conducted breakthrough research about natural colored fleece; Ryder has reviewed literature on the colors of fleece (1980).
Early documentation. During the late nineteenth and early twentieth centuries, there was a prevalent notion among the general American population that American Indians would lose their cultural identity and assimilate into the dominant American culture and the white race (Iverson, 1981). Photographer Edward Curtis, for example, titled his photo of Navajo people on horseback disappearing into a blurry background "The Vanishing Race." A popular magazine dispatched a photographer to record the last generation of American Indian babies (Draper, 1902). References reviewed here emerge from observations and attitudes of that time.

Documentation about sheep, wool, and weaving among the Navajo people appeared during the late 1800s. Matthews published information about Navajo wool processing, dyeing, and weaving (1884). His account, however, emphasizes dye preparation, loom building, and the weaving process, and he omits sheep and fleece characteristics. He states only that wool is washed after it is sheared, combed with hand cards bought from Americans, and spun using a hand spindle. Pepper (1902) also described wool processing, based on informal observations and on Matthews' work, but does not describe sheep or fleece qualities.8

The Franciscan Fathers of St. Michaels, Arizona,9 contributed detailed observations about Navajo culture and language, including sheep raising, wool processing, spinning, and weaving (1910). The Franciscan Fathers observed that Navajo men built looms and fashioned

8 Much of the academic and popular literature about Navajo textiles includes a degree of redundancy. Ann Hedlund, contemporary authority on Navajo weavers and weaving, stated in her doctoral dissertation, "The majority of publications on Navajo textiles are descriptive and historically-oriented; many are not based on original research so much as they are re-worked versions of previously published material" (1983, p. 14).
9 St. Michael's is a Catholic mission near Window Rock, Arizona. The mission at the time of this study included a church, school, and museum.
weaving tools, and that Navajo women owned and tended the sheep, processed the fleece, and wove the rugs. The Franciscans did not specify breed characteristics of the sheep. The methods they observed for washing and carding fleece, however, suggest the short, fine fibers of crossbred sheep, the predominant variety in reservation flocks at the turn of the twentieth century. The Franciscan Fathers recorded Navajo words for natural colored wool, presumably that of Navajo-Churro sheep: white, black, gray, dark with a reddish tinge, red, and blue. The weavers used synthetic dyes “almost exclusively in blankets made for the American trade, while for their own use many insist upon blankets woven of native colored wool” (p. 228).

During the first decade of the twentieth century, Hollister (1903) praised the fine texture and color found in older Navajo blankets woven of handspun, natural colored ‘native’ wool from ‘Navajo’ sheep. James (1914) assumed a romanticized view of Navajo women as shepherds and acknowledged ‘improvements’ to Navajo flocks:

The traders and the government officials are now trying to show the Navahos (sic) that it is to their best interest to keep sheep and goats apart, to kill or sell off as soon as they can all cheap cross-breeds, to kill their poor stock rams and buy those of pure breeds, and breed them only with sheep of assured wool-giving qualities, when wool is desired (James, 1914, p. 201).

Anthropologist Reichard (1936, 1939) recorded observations during three summers she lived among Navajo women. She described the importance of Navajo-Churro sheep to weavers:

By “Navajo sheep” is meant a peculiar breed, the origin of which is mixed, but which is the favorite of the Navajo, especially of the weaver. It owes its survival to its smallness, and its resistance to hunger, thirst and sudden changes in weather, particularly temperature. Its smallness is no drawback in the Navajo mind (1936, p. 7).

According to Reichard, some Navajo families opposed cross breeding their Navajo-Churro flocks with improved breeds:
It would be difficult, if not impossible, for a Navajo to sum up the disadvantages of the “better” breeds in this way, so for many years he has said nothing, but quietly though firmly resisted the “improving” of his flocks. On the eastern side of the Lukachukai Mountains, however, sheep have been highly bred for weight of flesh and wool, the aim being to sell in the world market. Indeed, the policy has been so thoroughly followed in one locality that now very little, if any, Navajo wool is woven. For such weaving as is done, carded wool bought from the trader is used.

But in the more “backward” regions of the Reservation where Navajo still live by their own efforts, the women have something to say about sheep breeding. They want wool, good wool, for weaving. They therefore select for their own work that from the “oldtime Navajo” sheep. I have seen wool of this kind so clean and long that it could be spun without carding. (1936, p. 9)

For weavers, the desirable qualities of Navajo-Churro fleece—long staple, low grease content, natural colors, lack of crimp—were more important than their lower fleece yield (Blunn, 1940, 1943; Reichard, 1936).

Southwestern Range and Sheep Breeding Laboratory (SRSBL). From 1936 until 1966, the Southwestern Range and Sheep Breeding Laboratory (SRSBL) conducted research about Navajo-Churro sheep and wool, their relationship to Navajo weaving, and the results of cross breeding them with improved breeds. Initiated as part of the depression-era New Deal by the US Department of the Interior and the Department of Agriculture, the SRSBL collected extensive data about Navajo-Churro sheep and about the results of cross breeding them with improved breeds. By the 1930s, crossbred sheep composed the majority of Navajo flocks. Only an estimated five percent of the wool produced on the reservation was from Navajo-Churro sheep (Grandstaff, 1942).

Wool production on the Navajo reservation faced a dilemma during the 1930s:

Since the art of weaving is so important in the economic life of the Navajo Indians, it is essential that they have available for weaving the type of wool that can be handled to best advantage in hand weaving. This problem is complicated by the fact that less than one-fourth of the wool is used for weaving, and the rest goes to the open market. If the type most desirable for weaving is not the same as that which sells to best
advantage on the market, then production of two types of wool may be necessary (Phillips, 1941, p. 22).

The SRSBL was charged with identifying improved breeds that would increase feeder lamb weight and wool yield when crossbred with the Navajo-Churro sheep. At the time, weaving accounted for an estimated 26% of income generated from Navajo livestock. The SRSBL determined that cross breeding with Rambouillet rams increased both feeder lamb weight and wool yield. The SRSBL was also charged, however, with documenting the physical properties of wool best suited for Navajo wool processing and weaving—acknowledging that crossbred wool was unsuited to Navajo wool processing and weaving methods (Blunn, 1940; Grandstaff, 1942). The purpose of the SRSBL was to “determine by scientific methods the physical characters of Navajo wool that made it particularly well adapted to the carding, spinning, and weaving methods used by Navajo women” (Grandstaff, 1942, p. 7).

The SRSBL obtained 800 Navajo-Churro ewes and 20 rams from remote regions of the reservation where crossbreeding had occurred least. Navajo women were hired to hand process, spin, and weave fleece from different sheep species, including the Navajo-Churro. The Navajo-Churro’s desert adaptation and suitability for Navajo textile methods impressed wool scientist Cecil Blunn, who recorded detailed characteristics of Navajo-Churro sheep and wool (1940, 1943). Blunn found a greater variability in the fibers of Navajo-Churro fleece, compared with fleece from improved breeds. He also found that selective breeding improved the uniformity of Navajo-Churro wool fibers and reduced kemp and medullated coarse fibers; uniform fibers with limited kemp provided better quality fleece for spinning and weaving. Blunn also used selective breeding to retain the hardiness and good mothering
behavior of Navajo-Churro ewes, adaptations that favored survival on Navajo range lands. A proponent of Navajo-Churro sheep for the Navajo people, Blunn returned a flock of hundreds to remote regions of the reservation when the SRSBL closed (1940).¹⁰

During the 1940s, crossbreds continued as the predominant sheep on the Navajo reservation. The opportunity for Navajo spinners and weavers to work with Navajo-Churro fleece slipped away into the isolated regions of the reservation (Blunn, 1943). Interest persisted in crossbreeding Navajo-Churro ewes with improved breed rams, a continued effort to develop one variety of sheep that would yield higher meat production and good fleece for Navajo weaving. Toward this goal, Corriedale sheep from New Zealand crossbred with Navajo-Churro sheep and introduced onto the reservation reportedly showed promise (Anderson, 1951; Colton, 1954). Navajo weavers still tended to prefer the long staple, straight, low grease fiber for hand spinning wool for weaving (Goll, 1987; Hedlund, 1983).

*Documentation after mid-twentieth century.* The cultural and geographic isolation of the Navajo people lessened after the mid-twentieth century. Road construction, wage labor, mandatory education, and off-reservation travel increased contact between Navajo and Anglo people and cultures. Scholarly references about Navajo weaving, many published in conjunction with museum exhibitions, appeared more concerned with the products than with the process of preparing wool and weaving. At times, Navajo-Churro sheep as a fiber resource was implied through brief descriptions of fiber strength, ease of spinning, and dye receptivity (Dockstader, 1987). Kent (1985) mentions “Churro wool” as the “traditional material used in Navajo textiles,” favored for its low grease and long staple fibers (p. 32).

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¹⁰ Archives for the SRSBL reside at the Wheelwright Museum of Anthropology in Santa Fe, New Mexico.
Rodee (1987) describes a weaver’s flock of “desirable brown” sheep she observed on the reservation, presumably Navajo-Churro (p. 227). Another discussion of sheep and fleece does not extend to specific breeds used for Navajo weaving (Hecht, 1987). Popular press publications also tended to neglect process and emphasize Navajo rugs as products (Tanner, 1964).

During the 1990s, publications paid more attention to fiber resources and the process of weaving. By 1995, Rodee devoted a chapter to fiber used for Navajo weaving, including a history and description of “Navajo Sheep” (p. 25). Hedlund’s interviews with Navajo weavers revealed their sophisticated application of a wide range of raw materials, including wool from Navajo-Churro sheep (Hedlund, 1992, 2003). Interestingly, Hedlund also found that Navajo weavers tended to focus more on process than product; weavers spent considerable time on wool preparation and weaving, but they usually sold their rugs soon after completion (Wheat, 2003).

The resurgence of interest in fiber handcrafts among non-Navajo artisans since the 1970s appeared to shift attention from weaving as product to the process of weaving. Non-Navajo artisans sought opportunities to study wool processing and weaving with Navajo artisans. Some published their experiences with Navajo-Churro sheep and wool as informal articles in fiber handcraft publications (Bennet, 1980; Muller, 1992, 1995; Strawn, 1999). Two instruction books about Navajo weaving include one Navajo co-author (Bennett & Bighorse, 1971, 1997). The 1971 publication omits mention of Navajo-Churro sheep and wool processing. The 1997 version, however, illustrates wool preparation, dyeing, and spinning. Bighorse describes her fiber resource as “hardy” sheep with “poor” wool, presumably a reference to Navajo-Churro sheep (Bennett & Bighorse, 1997, p. 42).
conjunction with the American Livestock Breeds Conservancy (ALBC), a traveling exhibition and catalog emphasized preserving rare domestic sheep breeds, including the Navajo-Churro, for unique fiber qualities and biodiversity (Robson, 2000).

**Sustainable Development**

Increased economic growth, international trade, and development intervention have intensified concerns about long-term environmental stress, including the loss of biodiversity. Before the 1960s, social and economic policies tended to exclude the impact of environmental problems. Environmental awareness grew among government, public, and science sectors during the 1970s, however, and concern about the impact of worldwide development intervention on the environment had become widespread by the 1980s (Bergh & Straaten, 1994). This section reviews literature about the relationship of sustainable development and the conservation of domestic animal biodiversity.

**Definitions**

The phrase ‘sustainable development’ was introduced in the 1987 Brundtland report *Our Common Future: Report of the World Commission on Environment and Development*, a publication that drew attention to the far-reaching impact of long-term environmental stress, including the depletion of genetic resources (WCED, 1987). Since then, scientists in a broad range of disciplines have proposed various definitions for sustainable development. All definitions refer to concerns about multi-dimensional, long-term changes in the relationship between humans and the ecosystem (Hodge, 1997). In addition, research and publications about sustainable development tend to emphasize the economic impact on developing nations (Bergh & Straaten, 1994). The United Nations Environment Programme (UNEP) in
particular conducts programs that support sustainable food production and responsible consumption of natural resources on a global scale (2004).

Sustainable development is an umbrella concept for sustainable agriculture. According to the United States Department of Agriculture (USDA) Sustainable Agriculture Research and Education (SARE) program, the tenets of sustainable agriculture encompass “broad goals and diverse strategies that support environmental stewardship, community and family stability, and economic profitability” (SARE, 2004). The Leopold Center for Sustainable Agriculture states:

In general, sustainable agriculture addresses the ecological, economic and social aspects of agriculture. To be sustainable, agriculture can operate only when the environment, its caretakers and surrounding communities are healthy. ... A sustainable agriculture must be all three—ecologically sound, economically viable, and socially responsible. And the three must be in harmony (LCSA, 2004).

Sustainable Models

Sustainable development literature includes numerous models that describe the relationship between humans and the environment (Bergh & Straaten, 1994; Hodge, 1997). More than 40 years ago, Firey first proposed a three-part model that balanced and optimized ecology, ethnology, and economics as categories of resource use (1960). Subsequent sustainability models within different disciplines have adapted the Firey model into now familiar ecological or environmental, social or cultural, and economic categories.

Progress toward sustainability is assessed using a variety of sustainability indicators. Indicators are quantifiable data collected from different communities, systems, and disciplines (Sustainable Measures, 2004). At an international scale, development organizations have become increasingly concerned that reliance on economic indicators alone will not assess progress toward sustainability:
At the heart of this appeal is a concern regarding the current emphasis on economic signals in assessing societal progress in the absence of a context that links to ecological and human well-being. In short economic analyses that do not take into account the full environmental and human costs have led to detrimental, even life-threatening, policies, decisions, and actions. The overwhelming response has been to call for new indicators that would reflect these full costs (Hodge, 1997, p. 5).

A combination of social, economic, and environmental indicators describes a more all-inclusive view of ways to sustain human well-being (Michaelos, 1997). Interpretive research informed by qualitative data contributes to a more comprehensive account of the human and environmental costs of development intervention (Glasser, Craig, & Kampton, 1994).

*Sustainable Development and Biodiversity*

The conservation of domestic animal genetic diversity and local livestock breeds are among the goals of sustainable agriculture and sustainable development (Köhler-Rollefson, 2001). Case studies worldwide have demonstrated the importance of local breeds, especially those associated with indigenous cultures. The introduction of improved sheep breeds in Tanzania in East Africa, for example, endangered local Tanzanian breeds. Researchers analyzed and documented the broad genetic diversity of local ecotypes and encouraged regional pastoralists to re-establish the well-adapted local Tanzanian breeds (Stephens, Wollny, & Gwakisa, 2001). Similarly, indigenous farmers in South Africa had shifted from their local livestock breeds to introduced improved breeds, which they perceived as superior. The World Conservation Union, South Africa (IUCN-SA) advocated for community-based management of indigenous breeds that could survive under harsh climates and ensure sustainable livelihoods (Mahlase & Fakir, 2001). In both cases, researchers recommended that indigenous cultures re-learn the value of their local breeds.
Such studies and recommendations do not always influence the development strategies prevalent in conservation and natural resource management (Thakadu, 2001). Development interventions often follow the pattern exemplified by efforts to improve the weight and wool yield of sheep in Chiapas, Mexico. The sheep of Chiapas are similar to Navajo-Churro; both are descendents of Spanish breeds that adapted to specific geographic regions. Tzotzil women of Chiapas have adopted sheep and wool into their culture, religion, and weaving. During the 1970s and 1980s, Mexican government extension services introduced Rambouillet, Columbia, and Romney Marsh rams—larger breeds that yield more wool—into Chiapas flocks. Unable to adapt to the mountain climate and low quality vegetation, the Rambouillet and Columbia sheep died. The Romney Marsh adapted to the environment, but the Romney/Chiapas crossbreds reverted to the same weight and wool yield as Chiapas sheep. In addition, male government extension workers communicated with Tzotzil men, not the women who take responsibility for sheep and weaving. Tzotzil women considered the crossbred wool unsuitable for hand weaving and the larger sheep unmanageable (Geerlings et al., 2002; Gomez, Castro, & Perezgrovas, 2001; Muller, 1999).

Much development intervention has consisted of top-down approaches that discourage traditional cultural knowledge and threaten the local breeds that have served as subsistence resources for farmers and pastoralists:

Failure to understand and appreciate the complexity of livestock ownership and to incorporate traditional knowledge and experience into most of the improvement projects initiated in the traditional/communal sector almost led to the disappearance of a number of economically important breeds (Ramsay, Hunlun, & Kotze, 2001, p. 131).
Concerned with the failure of paternalistic strategies implemented by dominant cultures, certain development specialists have encouraged grass roots, community-based models for sustainable development (Chambers 1983; 1997; Köhler-Rollefson, 2001; Sen, 1993, 1997).

Community-Based Models of Sustainable Development

At the heart of these development intervention models is the allocation of power. Chambers’ model of development (1983; 1997) encourages a shift from the dominant, top-down, paternalistic model in which power is concentrated in a dominant culture, to a more grass roots model that shares or allocates power with community-based resources. Development effort is sustained by shifting to an emphasis on improved well-being and livelihood for individuals at the bottom of the economy:

A massive shift in priorities and thinking has been taking place, from things and infrastructure to people and capabilities. Consonant with this shift, five words, taken together, seem to capture and express much of an emerging consensus. These are well-being, livelihood, capability, equity and sustainability (1997, p. 9).

Chambers defines well-being as more than quantifiable economic indicators; he includes a range of social, mental and spiritual factors. Livelihood describes access to tangible and intangible basics of service and goods. Capability refers to what people can do and the ways these contribute to well-being and livelihood. Equity means a way of leveling development initiatives concerning human rights. Sustainability requires policies and actions with a long-term perspective (1997).

Economist Amartya Sen emphasizes social values in economic development. Sen’s capabilities model distinguishes capability acquisition from application. For Sen, an important objective of development is maximizing capabilities, the freedom people have to pursue the kinds of lives they value. People not only need access to such resources as training...
and technology, they need real opportunities to apply learned skills. People also require the social and personal freedom to choose to access resources that may contribute to improved well-being. Sen distinguishes 'well-being freedom' from 'well-being achievement', a difference between the freedom to access resources that develop capabilities and the freedom to apply their achievements and improve well-being (1993, 1997).

When community-based sustainable development strategies are applied to local livestock breeds, agents of development organizations recognize farmers and pastoralists as the individuals who are best placed to manage local breeds. A sustainable development using a community-based strategy will:

- support, and provide incentives for, local communities to continue herding and husbanding their animal genetic resources in their respective ecological contexts, but with the opportunity to develop by responding to or taking advantage of changing marketing and macroeconomic situations. Such an approach suggests a win-win situation where conservation of domestic animal diversity can go hand-in-hand with the creation or maintenance of rural income opportunities (Köhler-Rollefson, 2001).

Key differences emerge between the effectiveness of top-down and community-based sustainable development models.

One example of the difference in effectiveness lies in the community-based approach to development intervention with Chiapas sheep, compared with the previously cited top-down strategies. In 1985, the Institute of Indigenous Studies (IIS), University of Chiapas, implemented a selective breeding program to improve the fleece of Chiapas sheep for weaving. The IIS scientists interviewed Tzotzil women to learn their preferences for fleece quality (color, staple length, fleece volume). They selectively bred Chiapas sheep guided by these preferences. This community-based model relied on indigenous, traditional knowledge and preferences. The IIS found that more Tzotzil women accepted the selectively bred
Chiapas sheep and fleece than had accepted the crossbred sheep that resulted from previous top-down development strategies (Geerlings et al., 2002; Gomez et al., Muller, 1995).

Textile Handcraft Traditions and Change

To assess the impact of Navajo-Churro wool as a traditional fiber for Navajo textiles, it is important to understand not only the historic context and craftsmanship but also ways that development intervention can change textile handcraft traditions. Development in itself generates concern about the impact of intervention on culture, including textile traditions. Sustainable development acknowledges the complexities and interconnection of critical factors that influence textile handcraft traditions. This section will review literature related to theory about ways that traditional textiles change, emphasizing factors of influence on Navajo-Churro wool and Navajo traditional textiles.

Tradition and Textiles

A contemporary definition of tradition from The Oxford English Dictionary defines tradition as "custom, opinion, or belief handed down to posterity" (Waite, 1994, p 702). Moreno's review of tradition as a phenomenon traces the debate regarding tradition versus modernity that arose during the seventeenth century's Age of Enlightenment and continued into the twentieth century (1995). In general, some scholars romanticize tradition, while others perceive tradition as the antithesis of modernity, equated with scientific progress.

Scholarly literature has elaborated similar arguments about textile traditions. At times, the consistent use of color, design, technique, media, and materials through generations of anonymous artisans has defined textile traditions (Goin, 1993; Graburn, 1976; Niessen, 1990). The predominant opinion revealed through research, however, considers change as a component of textile traditions. Change is considered a social construction linked
with invention, cross cultural contact, and economic realities (Baizerman, 1987; Hobsbawm & Ranger, 1983; Zorn, 1992). Observations also indicate a shift among some indigenous artisans from passive acceptance of dominant culture influence to more active participants who determine their own cultural expression (Berlo, 1991). Artisans in general tend to consider the process and techniques of making textiles more important than color, form, or design (Niessen, 1990).

Change in handcraft textile traditions is a type of culture change, an ongoing process. In the animal world, change most often consists of physiological adaptation to stress. Humans, however, use culture to adapt to the stress that accompanies new contacts, interactions, discoveries, and inventions. The stimulus for culture change may be internal or external. Culture change may occur when an internal innovator introduces a product, belief, or idea; culture change may occur when an external change agent introduces a voluntary or a directed strategy. In either case, the individual constituent cultures within a larger cultural group will react differently to internal or external stressors (Naylor, 1996). Applied to textile traditions, this introduces the concept of selective tradition: artisans select from an array of combinations of color, design, technique, media, and materials. Although external dominant culture may influences the choices, it is still the selector who determines the tradition (Appadurai, 1986).

Studies of Textile Traditions and Change

Studies have revealed different ways that artisans select changes in textile traditions. Some artisans incorporate change into textile traditions, but do not integrate introduced changes into their traditional practices. For example, external pressure to change traditional quilting motifs and colors split Hawaiian quilters into two factions: (1) traditional quilters of
ethnic Hawaiian descent who defined Hawaiian quilting as only the textiles that used time-honored patterns and colors, and (2) younger quilters, many not of ethnic Hawaiian descent, who adapted the older motifs and used new colors in innovative ways (Arthur, 2001). In contrast, three generations of Tai Dam immigrants adopted Western textiles for their traditional weddings but kept the two types of textiles separate. Tai Dam couples participated in two wedding ceremonies that used exclusively: (1) ethnographically Tai Dam wedding textiles, and (2) American wedding textiles (Demaray & Keim-Shenk, 2001). Additional studies describe ways that artisans have found to integrate traditional and introduced knowledge. Hmong immigrants to America have integrated their traditional Laotian reverse appliqué technique with new products—Christmas tree ornaments, pillows, wall hangings—that sell to the American market (Crippen, 1998). The Cuna Indians of the San Blas Islands reduced the number of layers used to appliqué molas, reducing the time required for tourist textiles (Crippen, 1998).

Studies also describe changes related to raw materials. For one thing, shortages of raw materials may threaten artisan sustainability (Kikuo, 2004). For another, textile artisans may lose indigenous knowledge when new materials are introduced. Sources of natural dyes, for example, may be replaced by synthetic dyes introduced through development intervention or trade (Kikuo, 2004; Urbanek, 2002; Wipplinger, 1998, 1999). In extreme cases, war disrupts the supply of indigenous raw materials. In Cambodia, for example, more than two decades of war devastated the indigenous sericulture industry that had supplied silk weavers. After the war, silk weavers depended on imported silk, subject to fluctuations in price and quality. Interestingly, Thai and Cambodian sericulture specialists also attempted to introduce larger, more productive silkworm varieties from Japan and China during the 1960s and
1970s. The cocoons, however, were disease prone and failed to adapt from a temperate to tropical monsoon climate. In 1995, development agents—who had intended to restore the quality of Cambodian silk weaving by introducing larger silk worms from Thailand—recommended instead that sericulturists raise their indigenous tropical silkworm, a local variety that has a low mortality rate and produces softer reeled silk than the introduced variety (Kikuo, 2004).

Changes specific to Navajo-Churro sheep and wool. Various events, policies, and intervention strategies have been factors of influence on Navajo-Churro sheep and wool, and on Navajo textile traditions. Documentation of these factors provides a technical basis for understanding Navajo-Churro wool as a traditional fiber used for Navajo textiles. The influence of cross breeding was described above, and the profound impact of livestock reduction policies will be described further in the history section of Chapter 3.

Incorporation of trade goods for weaving has influenced Navajo artisans for more than 350 years. Cotton came from the Pueblos, and Spanish settlers introduced natural dyes, bolts of fabric to unravel, mill spun wool yarn, and cotton spools for warp. Such trade goods often replaced or supplemented the sheep wool that itself originated as a type of trade goods obtained from Spanish explorers (Hedlund, 2003; Wheat, 2003).

Between 1800 and 1900, trading posts on the Navajo reservation exerted substantial influence on Navajo wool and weaving. Traders established Anglo-American markets for Navajo weaving and intentionally conveyed pattern, color, size, and quality preferences to weavers. Commercial yarns, chemical dyes, yard goods, and clothing were introduced by traders, but the Pendleton blanket in particular was favored by Navajo women and had largely replaced hand woven shoulder blankets by 1900 (Wheat, 2003).
Indian boarding schools influenced Navajo textiles. Navajo families had relied on sheep as an educational tool used to pass along cultural and social values. Beginning in 1879, however, the federal government assumed responsibility for education as part of a comprehensive assimilation policy for American Indians. Boarding schools for Indian children began at the old army barracks in Carlisle, Pennsylvania. Government-subsidized mission schools were the precursors of Indian boarding schools, all of which intended to separate Indian children from their families and immerse them in white culture (Archuleta, Child, & Lomawaima, 2000). Oral histories describe boarding school experiences that interrupted generations of sheep herding and weaving knowledge; some schools also taught weaving (Reichard, 1936; Stewart, 1980).

Turn-of-the-twentieth-century philanthropic organizations—the Indian Arts and Crafts Board (Meyn, 2001) and the Indian Industries League (Trump, 1996), for example—were influences on Navajo weaving. Their founders intended to encourage assimilation of American Indians by promoting and selling their traditional arts and crafts. However, members of both groups grew to value Indian artistry and culture. In particular, the Indian Industries League, a Boston-based reform organization established in 1892, initially sought to ‘civilize’ industries among American Indians but turned to supporting Indian arts (Trump, 1996).

Tourism and the arrival of the railroads to the Southwest profoundly influenced Navajo textiles. Selling traditional textiles, pottery, and jewelry to tourists offered one entry into the Anglo-American cash economy (Dilworth, 1996). The ‘Indian Rooms’ and private collections of the Fred Harvey Company exerted a strong influence on tourist markets for Navajo textiles (Howard & Pardue, 1996).
The fiber handcraft market has influenced the use of Navajo-Churro wool by selling substitute fiber resources to Navajo weavers, and also by marketing Navajo-Churro wool to an off-reservation fiber handcraft niche. Yarn and wool sold by off-reservation suppliers to the Navajo Nation have largely replaced Navajo-Churro wool in Navajo weaving. In particular, Brown Sheep Wool from Nebraska has targeted the Navajo weaving market (Hedlund, 2003). On the other hand, at the time of this study, specialty fiber shops and advertisements in fiber niche publications indicated a thriving handcraft market demand for natural colored wool and varieties of wool types.\(^{11}\) Handcrafts in general represented a $13.8 billion industry, as reported in the 2001 Craft Organization Directors Association (CODA) survey. The CODA survey emphasized that heritage/cultural tourism products claimed an especially strong economic impact within the handcrafts industry (Ross, 2001).\(^{12}\) The Hispanic co-operative Tierra Wools, located in Los Ojos, New Mexico, exemplifies an upscale handcraft and textile market potential for Navajo-Churro wool (Tierra Wools, 2002). In addition, more than 30 non-Navajo, off-reservation sheep producers raised Navajo-Churro sheep at the time of this study (N-CSA, 2004).

Summary

This chapter reviewed relevant literature that placed this interpretive study within the context of existing scholarship in three broad areas of research interest: Navajo-Churro sheep and wool, community-based sustainable development, and change in handcrafted textile

\(^{11}\) A scan of six prominent knitting and weaving publications in 2004 showed retail fiber shops and producers that advertised natural colored yarns. These included Tierra Wools in New Mexico, Wilde Yarns in Pennsylvania, Acorn Street in Seattle, Black Mesa in Arizona, Switzer Land in Colorado, Marr Haven in Michigan, and Folknits in the Yukon.

\(^{12}\) The Center for Business Research at the John A. Walker College of Business at Appalachian State University conducted the CODA survey. For information specific to this survey, see www.craftsreport.com
traditions. The first section of this chapter explored the significance of Navajo-Churro sheep as a ‘local’ (indigenous) livestock breed and traced the use of Navajo-Churro wool for Navajo textiles. Navajo-Churro sheep are an indigenous local breed valued for their contribution to the genetic diversity of domesticated livestock and to the cultural diversity of the Navajo people. Descended from the Churro sheep introduced by sixteenth century Spanish explorers, Navajo-Churro sheep provided a source of food, warmth, income, and independence in a society that embraced pastoralism. Navajo-Churro sheep adapted well and survived with low maintenance in the harsh climatic and range conditions of Navajo lands. Fleece from Navajo-Churro sheep is a traditional fiber resource.

Navajo weavers have valued Navajo-Churro fleece for its unique properties—long staple fibers, coarse texture, low grease content, and natural colors—that have contributed to high quality in Navajo textiles. Similar to the fate of other ‘local’ breeds world wide, the Navajo-Churro was deemed too low in production to compete in commercial markets and was crossbred with ‘improved’ breeds to increase weight and wool yield. This practice endangered the survival of the Navajo-Churro, and of the attendant genetic diversity and traditional knowledge within Navajo culture.

The second section of this chapter described models for community-based sustainable development that were used to organize the research methods and analysis of data. Sustainable development, a strategy focused on long-term environmental relationships between humans and the ecosystem, includes concerns about the loss of local breeds, genetic diversity, and traditional knowledge. Community-based sustainable development models acknowledge the value of traditional knowledge for sustaining local breeds. The third section discussed ways that development intervention impacts cultures and textile traditions. The
discussion focused on theory related to tradition and change in handcrafted textiles, including factors of influence on Navajo textiles. Studies indicate that textile traditions change in different ways, but may include the integration of traditional and introduced or invented ideas.
CHAPTER THREE: CONTEXT FOR THE STUDY

The context for this study is the Navajo Nation. The majority of Diné be' iiná (DBI) members, activities, meetings, and events are located on or near the Navajo Nation. Diné be' iiná works within the context of the Navajo Nation to achieve goals of restoring Navajo-Churro wool to the Navajo people, reclaiming status for sheep herding, and increasing the opportunity to use Navajo-Churro wool for Navajo textiles. This chapter describes the context for the opportunities and constraints in which DBI works toward these goals. First, this chapter will describe a brief history of the origins of the Navajo people, followed by a section about the contemporary demographics of the Navajo Nation. The chapter will conclude with a description of Diné be' iiná as a community-based Navajo organization located on the Navajo Nation.

The Navajo People

Among the American Indians, the Navajo people are relatively recent arrivals on the North American continent. Their ancestors, Athapaskan people, lived in small bands of sub-arctic hunting and gathering nomads in western Canada. Archaeologists have found scant evidence of their migration to the American Southwest. Analysis of tree ring data estimates the earliest Navajo structures date to the late fourteenth century and those in northern New Mexico to the fifteen and sixteenth centuries. It is generally accepted that the Athapaskans arrived sometime around the fifteenth century, bringing with them domed houses (hogans), shamanism, and their Athapaskan language (Oswalt, 2002; Towner, 1996; Wheat, 2003). Before European contact, the indigenous people who lived in the region known today as the American Southwest did not have domesticated sheep; the wild sheep that lived in the Rocky Mountains were never domesticated (Wheat, 2003).
Spanish Contact and Colonization

The story of sheep in Navajo history and the American Southwest begins with accounts of the earliest Spanish explorers in North America. For the early Spanish conquistadors, Athapaskans, Puebloans, and the Southwest meant souls for conversion, territory for the Spanish crown, wealth in gold and silver, and land ownership for Spanish second sons. Rumors of cities built of gold filtered to Mexico City from Cabeza de Vaca, the first Spaniard to venture into the southern region known today as New Mexico. In 1540, Francisco de Coronado set out for the Southwest leading an extensive entourage, including thousands of sheep intended for food, not wool. Coronado returned to Mexico City in 1542, leaving behind only two friars and a few sheep. It would be forty years before renewed rumors of wealth lured the Spaniards back to the Southwest (Wheat, 2003).

Subsequent generations of Spanish settlers considered the Southwest land for colonization. In 1598, Don Juan Oñate brought the first sheep used for their wool into the Rio Grande Valley. Although the conquistadors of New Spain had received a small number of Merino sheep from Spain during the sixteenth century, Oñate introduced Churro sheep—the common sheep of southern Spain (Wheat, 2003). Perhaps the records of Merinos in New Spain are the source of confusion in a classic reference on Navajo weaving that states the first wool sheep in the Southwest were Merinos (Amsden, 1934). Spanish settlers enslaved Puebloans, who then adapted wool from Churro sheep into their weaving. Puebloans revolted and drove out the Spanish in 1680. During Spanish re-conquest in 1692 and 1695, thousands of Puebloans were forced from their villages. Athapaskans, who had resisted Spanish domination, sheltered some of the Puebloan refugees and presumably obtained sheep from them (Bailey, 1980; Forbes, 1960). Trading patterns for sheep, however, indicate that the
Athapaskans had obtained sheep before the Pueblo Revolt (Bailey, 1980). Early records document sheep in Navajo possession as early as 1640 and 1706 (Hackett, 1937).

Emergence of the Navajo Culture

As a distinct culture, the Navajo population emerged during the early eighteenth century. The Navajos have described as a “biological and cultural hybrid(s), neither Athapaskan nor Puebloan, but a product of both” (Bailey & Bailey, 1986, p. 15). Some of the people within this culturally distinct population settled during the first decades of the eighteenth century in the upper Rio Grande and learned farming.¹ The Spanish called them the Apaches of the Great Fields or Apache de Navajo (Bailey, 1980; Towner, 1996; Wheat, 2003). The Navajo people refer to themselves as Diné, meaning “The People.” The Apache de Navajo recognized the value of sheep and goats and adopted agro-pastoralism as their way of life.

Anglo-Americans settlement in the Southwest intensified conflicts with the Navajos. Federal government attempts to subdue Navajo raiding failed. In 1863, General Carleton and Colonel Carson began a scorched-earth campaign that destroyed homes and food, including sheep. During the Long Walk, Carleton and Carson walked an estimated 9,000 Navajo people, some with the flocks they surrendered, 300 miles to the Bosque Redondo, New Mexico. An estimated 2,000 Navajo people who lived in the most isolated, remote regions avoided surrender or capture (Bailey & Bailey, 1986; Bailey, 1970, 1980; Wheat, 2003).

Treaty and Reservation

Confined at Bosque Redondo at the military post of Fort Sumner, the Navajo people lived under tragic conditions. They attempted to till alkaline land and lost many of their

¹ The Apache people also speak an Athapaskan language.
sheep to Comanche raiders. At least 2,000 Navajo people died during the Long Walk and at Fort Sumner. Others escaped back to their Navajo homeland. By 1868, the American government acknowledged the failure of the Bosque Redondo reservation. General William Sherman and Navajo leaders, notably Barboncito as Chief, negotiated the Treaty between the United States of America and the Navajo Tribe of Indians that re-established the Navajo people on a portion of their homeland. The treaty specified delivery of 15,000 sheep and goats, not to exceed a total cost of $30,000 (Link, 1968). For more than a year, native New Mexican sheep and goats were driven in small lots to the Indian Agencies installed by the treaty. In November 1869, thousands of Navajos from every corner of the reservation gathered to receive an allotment of two head of livestock per person:

Having suffered the greatest calamity that could befall a pastoral society—the loss of their livestock—what Navajos felt during the course of this distribution can not be adequately described. . . . As Barboncito exhorted from atop the corral wall, ‘Now you are beginning again. Take care of the sheep that have been given you as you care for your own children. . . . These few sheep must grow into flocks so that we, the People, can be as we once were’ (Bailey, 1980, p. 271).

Estimated numbers of Navajo livestock grew to 125,000 by 1873 and to between 500,000 and 1,000,000 by 1880. According to Bailey (1980), the 15,000 sheep and goats issued in 1869 could not account for the rapid increase; he attributed much of the growth in numbers to a “sizeable pool of livestock” left behind in Navajo lands that were available to those who returned from Fort Sumner (p. 270). Trading and raiding added to livestock numbers (Bailey & Bailey, 1986). Indian Agents, however, pointed out the low production of the Navajo-Churro sheep—they referred to them as Navajo ‘scrub’ sheep—and intended to

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2 According to army records, 15,000 sheep and goats were purchased from Vincente Romero of La Cueva, Mora County, New Mexico. They are referred to as the native New Mexican sheep descended from Spanish sheep (Blunn, 1940; Bailey, 1980).
increase wool yield and meat production by interbreeding Navajo-Churro sheep with higher production breeds (Blunn, 1940). Frequent turnover of Indian Agents coupled with no planned breeding program led to "very inferior sheep" (Blunn, 1940, p. 104) and "genetic chaos" within the remaining Navajo flocks (Bailey & Bailey, 1986, p. 131).

Federal Policy and Livestock Reductions

The story of Navajo-Churro sheep reflects the history of federal policy toward American Indians in general, policy that has been summarized as vacillation between assimilation and termination. Concerned that Indians had become government wards, the Dawes Act of 1887 attempted assimilation and substantially reduced all tribal holdings. The Meriam Report of 1928 acknowledged the failure of assimilation policy and encouraged a move toward self-government on Indian lands. Work relief programs of the 1930s and World War II defense and military work drew substantial numbers of Indians to urban areas. Assimilation policy of the 1950s concluded the reservations were overpopulated, and the Bureau of Indian Affairs adopted an official termination policy intended to remove American Indians from reservations. By the 1960s, however, termination policy had been discredited in favor of Indian self-determination, culminating in the Indian Self-Determination and Education Assistance Act of 1975 (Ainsworth, 1989).

The fate of Navajo-Churro sheep reflects federal policy shifts between assimilation and termination. The Navajo people who returned from Fort Sumner rebounded in numbers of people and livestock, especially sheep and goats. Navajo herders practiced transhumance, and, before internment at Fort Sumner, had grazed their flocks on vast areas of land. Confined to the smaller region specified by the treaty, herders corralled sheep at night and grazed them out from the corral during the day. This denuded the land around the hogan and
tended to overgraze the surrounding land while leaving distant range underused (Bailey, 1980; Blunn, 1940). Nevertheless, the sheep population had increased from an estimated 30,000 in 1979 to nearly 1,300,000 by 1930 (Bailey, 1980). Between 1930 and 1933, Federal government surveys determined that twelve of the fourteen million reservation acres could support grazing and could accommodate only 500,000 sheep units (one sheep and one goat equal one sheep unit, calculated according to annual forage consumption) In 1934, the process of livestock reduction was initiated, decreasing the numbers of sheep and goats by more than 350,000 over five years. The process shocked the Navajo people. By 1950, sheep no longer formed the base of wealth; without sheep, the Navajo people descended into poverty (Bailey, 1980).

Forced reductions of Navajo-Churro sheep destroyed a major factor in Navajo social organization, which had been well in place by 1800. Sheep dominated Navajo economics, education, and social interaction:

The social and cultural life of a family owning even four or five sheep is largely determined by this ownership. In part this is owing to cultural patterns built around sheep keeping as a way of life and supporting the patterns of sheep keeping as the "right" way to live... .Sheep keeping also requires herding and tending every day, so that the activities of man are dominated by the needs of the herd (Downs, 1972, p. 57).

Sheep meant more than wealth and prestige. Sheep provided a focal point of responsibility and nurturance for the Navajo people (Bailey, 1980). Uncoordinated federal policy and programs eroded traditional means of livelihood on the reservation and encouraged dependence on wage labor (Chaudhary, 2000, 2003). As early as the 1920s, Navajo men who worked on federal irrigation and water conservation projects delegated household and livestock work to women, precluding time to process wool and weave (Reichard, 1936). The
numbers of American Indian women working in the labor force has risen sharply, from 35% to 48% between 1970 and 1980 alone (Jaimes, 1992). In 2000, 40.6% of Navajo women 16 years and older living in chapters on the reservation were employed in the labor force (Chaudhary, 2000). Participation in the wage economy, even in the predominant secondary labor market, can mean less time and energy to process wool, tend livestock, and weave.

The Navajo Nation

Deeply attached to the dramatic high desert and alpine landscape that holds sacred sites and origin stories, the Navajo people are among the few American Indians whose reservation occupies their ancestral homeland (Appendix M). Ancient volcanic activity formed the mountains on the Navajo Nation, some reaching above 10,000 feet. Erosion from wind and water carved the canyons and mesas of the Navajo homeland. The extraordinary natural features of Canyon de Chelly, Shiprock, and Monument Valley are among the well-known landmarks on Navajo lands. Four Sacred Mountains provide spiritual boundaries for the land of the Navajo people: Mount Blanca to the east, Mount Taylor to the south, the San Francisco Peaks to the west, and Mt. Hesperus to the north. The Navajo Nation consists of land on the southwestern Colorado Plateau of Utah, New Mexico, and Arizona (See Figure 3.1). At 17 million acres (26,000 square miles), the Navajo Nation is geographically the largest of the 318 American Indian reservations (Choudhary, 2000; Goodman, 1982).

Population

The United States Census 2000 reported a total population of 2,475,956 American Indian and Alaska Native people, of whom 298,215 were Navajos (Choudhary, 2000). The

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3 The US Census 2000 reported that 24,239 females, out of a total of 59,634 females counted in all Navajo Nation chapters, were in the labor force (Choudhary, 2000).

4 The land area of the Navajo Nation is comparable to West Virginia or Ireland.
American government estimated 9,000 Navajos lived on the reservation in 1868 and that the population had grown to 18,000 in 1892 (Bailey & Bailey, 1986). Census 2000 counted 173,987 Navajo people living on the Navajo Nation, 96.41% of the total population.\(^5\) Between the decennial censuses, the Navajo Nation Division of Economic Development (DED) also estimated growth rates and population figures. The DED estimated the 2002 Navajo Nation population at 187,152, extrapolating from annual growth rates of 1.2% between 1980 and 1990 and 1.82% between 1990 and 2000. According to Census 2000 tables, the Navajo Nation has 37,903 families who occupy 47,824 of the existing 69,154 housing units.\(^6\) The average family consists of 4.36 persons, the average household of 3.77 persons (Choudhary, 2003). Population centers on the Navajo Nation consist of housing clusters built near schools, hospitals, or trading posts. Extended families may often reside in small, isolated clusters of homes. The Navajo Nation has no cities, and Kayenta, with a chapter population of 6,315 people, is the only municipality (Choudhary, 2000).

There are similarities and differences between the Navajo Nation population and the American population as a whole. For one thing, the Navajo Nation population is younger; the median age on the Navajo Nation was 24 years in 2000, compared with 35.3 years in the overall American population. The proportion of males to females, however, is comparable to that of the overall American population; 49.02% of people on the Navajo Nation were male and 50.98% female in 2000 (Choudhary, 2003). The Navajo Nation has tended to contribute

\(^5\) Whites, with 5,223 people (2.89%) were the second largest racial group living on the Navajo Nation.

\(^6\) The Navajo people have a death taboo and prefer not to live in a dwelling where someone has died. A family tends not to move into a dwelling from which another family has moved. Some families reserve hogans for ceremonial use; others own empty hogans on their grazing permit lands but live in homes near their jobs. These are some of the reasons for the high number of uninhabited dwellings on the reservation.
more men and women to the armed forces than the overall American population. The Citizenship Act of 1924 made Navajos legal citizens of the United States and subject to the draft. During World War II, when the estimated adult Navajo population was slightly less than 25,000 people, some 3,600 Navajos volunteered or were drafted for military service and approximately 15,000 Navajos worked in war-related industries (Bailey & Bailey, 1986).

The percentage of veterans from the Persian Gulf War era and Vietnam War era outnumbers the percentage in the general American population (Choudhary, 2000).

**Language**

Navajo, an Athapaskan language, and English predominate as the languages spoken on the Navajo Nation. Census 2000 also found small numbers of people who spoke German, Chinese, Japanese, Korean, Thai, Hungarian, Portuguese, French, Gujurathi, and Pacific Island and African languages, presumably as the first language of non-Navajo people employed on the reservation. A larger number spoke Spanish or other Native North American languages. Census data indicates that the proportion of English and Navajo speakers varies according to age. In general, more young people speak only English, and more older Navajo people speak Navajo. Census 2000 found that among 163,807 people on the Navajo Nation, approximately 15% of 5- to 17-year-olds spoke English only, and 10.4% spoke Navajo. Among those 18 years and older, however, only 10.4% spoke only English, but 54% spoke Navajo (Choudhary, 2000).

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7 The large numbers of Navajo speakers made it possible for the military to use the Navajo language as code to transmit battlefield communications and to establish several platoons of the well-known Navajo code talkers (Bailey & Bailey, 1986).

8 For the Persian Gulf War era (August 1990 or later), the US Census 2000 recorded 12.7% civilian veterans for the US population and 17.5% for the Navajo Nation. For the Vietnam War era (August 1964 to April 1975), the figures are 31.7% for the US population and 33.5% for the Navajo Nation (Choudhary, 2000).
Health

Differences exist in health demographics between the Navajo population and the United States population. The Navajo Nation reports higher rates of accidents, diabetes, tuberculosis, alcoholism, pneumonia, and suicide, but lower incidences of cancer, heart disease, and human immunodeficiency virus (HIV) than the American population in general. In 1997, life expectancy at birth was 72.3 years in the Navajo Nation and 76.5 years in the United States as a whole. There were 21.7 births per 1,000 population in the Navajo Nation compared with 14.5 in the overall American population (Navajo Area Indian Health Services, cited in Choudhary, 2003).

Public and private health care providers serve the Navajo Nation. The Navajo Area Indian Health Services, the third largest employer on the Navajo Nation, administers the largest number of hospitals and health centers for the Navajo people. The Navajo Division of Health, sponsored by the Navajo Tribe, works to make available a range of culturally appropriate health-related services. A number of private providers—hospitals, traditional medicine persons, dentists, chiropractors, and optometrists—also offer health care services on the reservation (Choudhary, 2003).

Education

The Navajo Nation has dedicated resources toward educational opportunities for Navajo children and continuing education for adults. The treaty of 1868 specified mandatory education for all Navajo children on the reservation, taught in English by teachers provided by the American government. As part of assimilation policy, the majority of Navajo children

9 Article VI of the Treaty between the United States of America and the Navajo tribe of Indians with a record of the discussions that led to its signing specifies that “for every
attended Indian boarding schools on or off the reservation (Archuleta, Child, & Lomawaima, 2000; Stewart, 1980). Educational services for Navajo children at present emphasize day schools provided by Arizona, New Mexico, and Utah Public Schools; the Bureau of Indian Affairs Schools; Grant Schools; and Association of Navajo Controlled Schools. The Navajo Nation Government runs its own Headstart Program. School buses are common sights on the reservation. Each day, dozens of familiar yellow school buses fan out onto networks of unpaved roads, gathering Navajo children from rural family residences and carrying them to schools constructed in population centers. There are problems, however, with student retention. Census 2000 found that 54% of American Indians over the age of 25 years living on the Navajo Nation had a high school diploma or higher, including equivalences, and that slightly less than five percent had earned a bachelor’s degree. The 2004 Shirley-Dayish administration designated education their highest priority and tried to fill teaching positions with Navajo educators (Choudhary, 2000, 2003).

The most noteworthy perhaps of the Navajo Nation resources dedicated to education is Diné College. In 1968, the Navajo Tribe chartered Navajo Community College (now Diné College), the first college established by Native Americans for Native Americans. In 1976, the North Central Association granted accreditation to Diné College, the first tribally controlled, two-year college to receive accreditation. The residential campus in Tsaile, Arizona, was designed in the traditional shape that reflects the symbolic strength of the hogan. Seven community campuses located on the reservation are dedicated to meeting the thirty children between said ages [of six and sixteen years] who can be induced or compelled to attend school, a house shall be provided, and a teacher competent to teach the elementary branches of an English education shall be furnished, who will reside among said Indians, and faithfully discharge his or her duties as a teacher.” (Cited in Link, 1968).  

10 In 2002, Diné College received re-accreditation for eight years.
educational needs of their communities. Diné College students deepen their knowledge of Navajo history, culture, and language while they earn associate degrees and certificates in career areas important to the social, economic, and cultural well-being of the Navajo Nation. The academic divisions, varying among the eight campuses, include Business, Business & Applied Sciences, Center for Diné Studies, Center for Diné Teacher Education, Communications/Fine Arts/Humanities, Social & Behavioral Sciences, and Math/Science/Technology (Diné College, 2004). Since 1968, Diné College has enrolled more than 100,000 students and conferred more than 2,500 associate degrees¹¹ (Chaudhary, 2003).

**Government**

Federal policy superimposed a system of centralized government onto the traditional clan-based Navajo lifeway. The Navajo Tribal Council formed in 1923, and five administrative agencies—Chinle, Eastern, Fort Defiance, Shiprock, and Western—were subdivided into nineteen grazing districts in 1936 to manage range resources. During the early 1930s, the Commissioner of Indian Affairs chose Window Rock, Arizona, as the capital of the Navajo Nation (Choudhary, 2003). Near the rock formation that lends Window Rock its name, the Works in Public Administration (WPA) program constructed many of the buildings that continue to provide headquarters for the Navajo Nation government.

The government of the Navajo Nation consisted of the Tribal Council headed by a chairman until 1989, when a three-branch system was established—the executive, judicial, and legislative. The executive branch includes a president and vice-president elected by

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¹¹ Five of fifteen participants in this study had taken classes at Diné College to advance special interests in the Navajo language, culture, or handcrafts (especially weaving). None, however, were enrolled as degree candidates. This category of student—individuals who enroll in an occasional class without working toward a degree—perhaps accounts in part for the low percentage degrees awarded relative to student enrollment.
popular vote for a four-year term; the judicial branch headed by a chief justice appointed by
the president and confirmed by the council; and the legislative branch with the Navajo Nation
Council of 88 council delegates elected for a four-year term by registered voters in each of
110 chapters. As the smallest administrative units, chapters are intended as grassroots
political elements that obtain representation commensurate with their populations. Some
council delegates represent more than one chapter, while other chapters have more than one
council delegate. Chapter houses serve as administrative and meeting centers (Navajo
Nation, 2004).

Economy

The economy of the Navajo Nation is sometimes compared with that of a developing
country, citing similar high rates of unemployment and poverty, low income and educational
levels, and inadequate basic amenities. Census 2000 reported that median household income
on the Navajo Nation was $20,005, and per capita income was $7,269, compared with
$50,046 and $21,587, respectively, for the American population as a whole. The
unemployment rate on the Navajo Nation increased from 27.9% in 1990 to 42.16% in 2001,
approaching seven times the unemployment rate in the general American population. Among
nearly 48,000 households on the Navajo Nation, 60.1% lacked telephone service, 31.9%
lacked complete plumbing facilities, and 28.1% lacked complete kitchen facilities. An
estimated 42.90% of individuals, 40.10% of families, and 53.1% of families with a female
householder lived below the poverty threshold.\textsuperscript{12} Faced with inadequate retail outlets, one

\textsuperscript{12} The US Bureau of the Census calculates poverty thresholds according to size of
family and number of related children under 18 years. The average poverty threshold for a
household with two related children was $17,463 in 2000 (US Census Bureau, 2000). The
average household size on the Navajo Nation is 3.77 (Choudhary, 2003).
survey found more than 71% of Navajo Nation personal income was spent in off-reservation towns (Choudhary, 2000, 2003).

Other sources of income—natural resources, tourism, taxes, welfare system, self-employment, the informal sector—bolster the economy. The Navajo Nation reported an operating budget in 2003 of more than $425 million. Both external and internal sources provide income. The primary internal sources of revenue are mining and taxes. Mining, oil, and gas alone accounted for income more than $70 million, and taxes, the second largest source of internal revenue, brought in more than $57 million in 2002. The Navajo Nation assesses taxes on business activity, removal of oil and gas, hotel occupancy, tobacco products, gasoline, retail sales, and possessory interests. Among sources of external revenue, grants—federal, state, and private—generate the most income, although welfare benefits, medical and educational services also contribute. Grants have increased during the past five years and totaled more than $300 million in 2002 (Office of the Controller, cited in Choudhary, 2003).

The imminent closure of several coalmines on the Navajo Nation threatens to generate a severe economic crisis. In 2003, the Navajo government was considering two options to offset their financial loss: 1) income tax on the aggregate wage, salary, and self-employment income, to add projected funds of more than $1,066 million total in 1999, and 2)

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13 A possessory interest refers to an activity that takes place on Navajo land: a business site, rights-of-way, and oil, gas, and coal leases.

14 For example, federal grants to the Navajo Nation announced October, 2002, included $84,922 for a victim assistance program in Window Rock, $1.9 million for feasibility studies and design for drinking water wells in 23 Navajo communities, $289,000 for environmental issues including illegal dump sites, $147,416 for education in Piñon, and $157,500 for the Monument Valley Welcome Center’s Arts and Crafts Vending Mall (Hayworth Web site, 2004).
renting their allocated 2,400 slot machines to casinos in Arizona, to add annual projected funds of $18 million (Choudhary, 2003). Navajo voters defeated proposals to implement casino gambling on the reservation in 1994 and 1997. A referendum passed during the November, 2004 election, however, will allow any chapter on the Navajo nation to decide to establish gambling (Maniaci, 2004). Navajo Nation President Shirley proposed six bond financing packages in 2004, totaling more than $500 million to fund capital improvement projects, public safety, and economic development as part of his development plan to decrease dependency on the federal government and stimulate business development and tourism (Dempsey, 2004; Helms, 2004).

Employment

Demographic data from the US Census 2000 estimated the labor force (defined as the sum of the numbers of employed persons and unemployed persons seeking work) on the Navajo Nation at 28.46% (56,054 people), in comparison with 49.33% in the American population as a whole. The Navajo Nation Division of Economic Development (DED) attributed the low labor force number on the Navajo Nation to the many persons who stop searching for work, discouraged by the reservation’s limited employment opportunities. The unemployment rate has risen as the labor force increased during the past decade, and the total number of persons employed on the reservation has held steady at around 30,000. In addition, per capita income on the reservation has shown only a modest increase (Chaudhary, 2003).

Major employers on the reservation include both tribal enterprises and private sector enterprises. Excluding government offices, in 2001 the DED counted 664 employers, 243 Navajo and 421 non-Navajo. The Navajo Nation, the largest employer, owns and operates
twelve enterprises that include a utility authority, housing authority, agricultural products industries, energy development and pipelines, hotels, restaurants, service stations, shopping centers, arts and crafts centers, radio stations, a transit system, and a newspaper. The state of Arizona employs the second largest number of individuals, most in public schools. Private sector employers include a communications company, industrial manufacturing, power generating stations, and coal mines. In 2001, the majority of wage employment was in the service sector (46.27%), followed by government work (27.42%), wholesale and retail trade (9.44%) mining (4.63%), construction (2.72%), and finance (1.23%). Manufacturing (0.97%) and agriculture (0.71%) employed the fewest workers. Although the estimated three million tourists who visited the Navajo Nation in 2002 could contribute to their economy, the Navajo Nation has not developed sufficient hotels, restaurants, and retail crafts outlets to capture a significant portion of tourist dollars. Tourists spend much of their travel and craft purchase money in the border towns beside the reservation (Choudhary, 2000, 2003).

Research has revealed that much of the underground or 'informal' sector of the economy has become a way of life that goes unreported in the US Census data (Francisconi, 1998). Census 2000 found 2,702 households on the Navajo Nation that reported $23 million in self-employment income (Choudhary, 2003). Nearly all communities have food stalls and flea markets, and artisans often sell arts and crafts—jewelry and textiles, in particular—near tourist attractions. Based on personal knowledge, the director of the DED estimates this informal economy at $25 to 30 million in Gallup alone, and at $5 million at private and roadside sales (Choudhary, personal communication, January 28, 2004). Many people on the Navajo Nation devise multi-income resources—the wage, welfare, and informal sectors—to sustain their households.
Sheep and Wool Industry

Agriculture in general and the sheep and wool industry in particular declined on the Navajo Nation after the rapid growth of the post-World War II wage economy among Navajo people. Agricultural statistics reveal a devastating loss in the American sheep and wool industry as a whole. From 1965 to 1995, the number of sheep in the US declined from 25.7 million to 9.5 million (FAO, 1999). Between 1992 and 2001, the number of sheep and lambs shorn decreased from 10.5 million to 5.7 million. The value of wool production during that period decreased even more—from $60.2 million to $15.3 million. These figures reveal a 50% decrease in the amount of shorn wool, but a 75% decrease in the value of wool production (USDC, 2004).

Examples from the Navajo Nation at the time of this study reflect these declines. In 1996, the Navajo Nation closed its enterprise that purchased wool, the Navajo Wool Growers Marketing Program Facilities, because it had consistently lost money (Choudhary, personal communication, January 28, 2004). The Navajo Nation proposed a wool scouring plant that never materialized (Ernst & Ernst, 1964; Navajo Tribe, 1980) due in part to concerns about toxic by-products from the process and a perceived lack of available wool (Choudhary, personal communication, January 28, 2004). Records for the numbers of sheep on the reservation are reported in files at the Navajo Nation Department of Agriculture in Window Rock. Not all residences file these reports, however, and the records do not distinguish breeds. Interestingly, another community-based cooperative with more than 100 sheep producers is crossbreeding Navajo-Churro sheep with improved breeds, setting a goal to improve wool quality and increase the weight of lambs marketed to off-reservation buyers.
Navajo weavers continue to use wool for their rugs but incorporate a variety of combinations of fiber sources, frequently combining commercial fibers with handspun (Hedlund, 2003). Visitors to the Navajo Nation will observe fewer trading posts than in the past that continue to sell Navajo rugs, fleece, roving, or hand spun yarn. The number of old-style trading posts that sell Navajo textiles has dwindled, replaced by gas stations and convenience stores. Many outlets for Navajo rugs are located off the reservation. In Gallup, for example, the phone directory lists 42 retailers and 70 wholesalers of Navajo arts, especially weaving and jewelry. My ‘walking’ survey of more than 30 off-reservation retailers of Navajo weaving in Gallup and Farmington, New Mexico, turned up no reference to the use of Navajo-Churro wool. The tribal-owned Navajo Arts and Crafts Enterprise (NACE), however, continues to sell Navajo-made handcrafts, including yarn and weaving, at six retail outlets on the reservation (Trahant, 1996).

Diné be' iiná (The Navajo Lifeway)

The focus of this study is the non-profit, community-based organization Diné be' iiná (DBI) that supports culturally relevant economic development based on sheep, wool, and fiber arts. DBI conducts educational programs, in particular its major annual event called the Sheep is Life Celebration (SiLC). The purpose of DBI is spelled out in its organizational bylaws, Web site, Articles of Incorporation, and promotional publications. Article III of the bylaws for Diné be' iiná, Inc. (a/k/a The Navajo Lifeway) states:

The goal of the Corporation is to preserve, protect, and promote the Navajo way of life; to encourage the participation and cooperation of the Navajo people among themselves and with other people and organizations; and to engage in research,
education, development, establishment, and promotion of projects and activities which further these ends (DBI Bylaws, 2002).

The DBI Web site defines its organization and goals as follows:

Diné be' iiná, Inc. (The Navajo Lifeway) is a community-based nonprofit Navajo organization founded in 1991 to provide leadership, economic development, and support for the traditional lifeways of Navajo sheep producers and weavers. The organization seeks to restore status to sheep herding, wool processing, and weaving, and to promote the education that is necessary for their pursuit in the modern world. DBI is dedicated to conserving the traditional Navajo-Churro sheep breed as well as to educating the community and the public about the importance of Navajo Sheep Culture and spirituality. DBI collaborates with other groups, agencies, and individuals to organize cultural programs, technical assistance workshops, economic development initiatives, and outreach activities (Diné be' iiná, Inc. Web site, retrieved October 26, 2004).

On November 16, 2002, DBI incorporated and achieved the status of a 501(c)(3) charitable and educational organization granted under the Navajo Nation Nonprofit Act.

Article IV of the Articles of Incorporation for Diné be' iiná, Inc. (a/k/a The Navajo Lifeway) describes the organization's purpose:

The statement of the character of the affairs of the Corporation is to train, educate, and develop the capacity of Navajo communities and persons to preserve and continue their culture, traditions and livelihood, in particular, those that sheep, wool and weaving have meant, and continue to mean, to the Diné (DBI Articles of Incorporation, 2002).

According to a 2003 promotional DBI brochure:

Diné be' iiná’s mission is to restore the balance between Navajo people, culture, life, and land by carrying out projects to:

1) establish and manage culturally relevant projects based on sheep, wool, and weaving;
2) educate the Navajo sheep and wool producers about progressive small flock management, genetics, land restoration, and animal husbandry techniques in order to improve the quality of their sheep and wool;
3) encourage the reintroduction of the rare Navajo-Churro breed, emphasizing the multiple benefits of Churro meat, wool, and weavings, and the breed’s adaptability for the arid Southwest environment;
4) inform both Navajos and non-Navajos about the historic relationship among sheep, land management, and Navajo lifeways; and
5) develop an infrastructure for accessing Navajo and non-Navajo markets so that Navajo agro-pastoralists can derive a better economic return from their sheep, goats, and fiber arts.

This study focuses on ways that DBI works to restore and promote Navajo-Churro sheep wool, a sustainable fiber resource, for traditional hand-produced Navajo textiles.

History

Diné be'íiná was founded in 1991 by a small number of Navajo women, their families, and several non-Navajo individuals, all of whom sought to restore and maintain traditional values embedded in raising Navajo-Churro sheep on the Navajo Nation. Its umbrella organization, the Navajo Sheep Project (NSP), had been developed in 1977 to preserve Navajo-Churro sheep. Dr. Lyle McNeal at the College of Agriculture, Utah State University, recognized the genetic value and ecological soundness of the Navajo sheep and founded the Navajo Sheep Project. By searching the remote canyons of the reservation, McNeal spent ten years gathering phenotypic, 'old-type' Navajo sheep and establishing a breeding herd in Utah. The NSP returned Navajo-Churro sheep to Navajo and Hispanic weavers and sheep producers on the Navajo Nation and to non-reservation preservation projects (McNeal, 1986).15

McNeal identified two key challenges facing the re-establishment of Navajo-Churro sheep: 1) establishing breed standards for sheep and wool, and 2) educating sheep raisers about breeding and management practices (McNeal, 1986). The formation of the Navajo-

15 The library at the Museum of New Mexico Museum of Indian Arts & Culture Laboratory of Anthropology in Santa Fe, New Mexico, holds a file with promotional and informational articles that describe Dr. McNeal's work with the Navajo Sheep Project. In addition, "Spin-Off" magazine published periodic updates on the NSP (McNeal, 1984, June; Robson, 1996, Winter).
Churro Sheep Association (N-CSA) addressed the first challenge. The N-CSA maintains a breed standard, list of breeders, and educational material (N-CSA, 2004). An outreach program for co-operative groups motivated by economic need and a desire to raise Navajo-Churro sheep addressed the second challenge. One of the programs led to the annual Sheep is Life Celebration now organized and held on the Navajo Nation.

**Membership**

The definition of DBI membership has changed since 1991. In the early years, membership and service on the executive and advisory boards was limited to women, but later opened to male weavers and sheep producers. For at least the first five years, membership was available only to Navajos, with associate membership open to non-Navajos, for annual dues of ten dollars, reduced to five dollars for students and elders (Robson, 1996). Paid membership, however, generated unrealistic expectations about benefits and services (a newsletter and regularly scheduled programs, for example), so DBI eliminated dues and redefined membership. At present, DBI defines a member as anyone who participates in DBI meetings or programs, and who demonstrates commitment to DBI’s goals (Suzanne Jamison, personal communication, January 29, 2004).

**Management**

A volunteer board of directors (executive board) and an advisory board manage DBI. The executive board may consist of between five and eleven members. Members of the executive board initiate and carry out fundraising, community outreach, educational programs, and appointments to committees and the advisory board. A president, vice-president, secretary, treasurer, and four directors, including the parliamentarian, composed the executive board at the time of this research. Seventy-five percent of the voting directors
must be Navajo (Diné be' iiná, Inc. Bylaws, 2002). At the time of this study, six Navajos and one Mexican-American served on the executive board.

The executive board elects members to the advisory board, which consists of one or more representatives from partnering organizations or individuals from different parts of the Navajo Nation who have a range of interests and expertise. The advisors receive meeting announcements and are invited to participate in board meeting discussions. Advisory board members, however, do not vote and are not required to attend board meetings. Advisory board members participated in the planning committee for the Sheep is Life Celebration and organized field days and workshops in various communities on the Navajo Nation (Diné be' iiná, Inc., 2003; Diné be' iiná, Inc., 2002).

Consultants

In accordance with the Navajo Business Preference Act, DBI contracts with Navajo consultants whenever possible. These include Navajo sheepherders, fiber artists, and range management specialists who present workshops and demonstrations. Non-Navajo consultants, however, contribute to DBI and its programs. Among these, several have made especially notable contributions. Dr. Lyle McNeal continues to travel from Utah to attend the SiLC where he presents programs and judges livestock competitions. In 2003, he received the DBI Lifetime Achievement Award. Suzanne Jamison travels from Silver City, New Mexico, to contribute non-profit organizational and grant writing expertise based on thirty years of experience with non-profit organizations and studies of such models as Handmade in America, an Appalachian handcraft and community development organization (Suzanne Jamison, personal communication, January 29, 2004). She received the 2004 Lifetime Achievement Award from DBI. Clark deSchweinitz, senior attorney, has donated legal
counsel for many years. He reviews documents and drives from Santa Fe to attend from four to six meetings each year. Mark Petersen, NSP President, and Judy Chism, NSP treasurer at the time of this study, had worked with DBI to oversee the transfer of Navajo-Churro sheep from Utah to the Navajo Nation. Connie Taylor, a founding member of DBI and the Navajo-Churro Sheep Association, lives near Taos and keeps a Navajo-Churro flock. She received the 2004 Outstanding Volunteer Award from DBI (ANA, 2003; Personal observations at DBI events, 2003, 2004).

*Diné be' iiná Programs*

Members of the DBI executive and advisory boards organize year-round educational programs and one annual major event. Consistent with DBI's purpose, educational programs emphasize ways to restore Navajo-Churro sheep, manage range and grazing, encourage youth involvement, generate income with small flocks, and experience hands-on training and knowledge through community outreach. Sample activities include:

- Distributing hundreds of Navajo-Churro sheep from the Navajo Sheep Project to Navajo sheep-producing families,

- Distributing guard llamas, with management and care training, to families who received Navajo-Churro sheep (Participant 09, personal communication, January 2004),

- Conducting workshops with youth and elders about processing wool, felting, and spinning, with demonstrations of such nontraditional equipment as the spinning wheel and drum carder (Diné be' iiná, Inc., 2004; SEDS, 2003),

- Organizing 'spin-offs' hosted by DBI members on the last Sunday of each month, where weavers gather to share ideas and hands-on learning (Participants 01, 08, personal communication, December 2003),

- Presenting integrated range and land management courses for livestock producers (Diné be' iiná, Inc., 2004),
• Participating in the Indivisible Project for the Pew Charitable Trust as one of twelve outstanding community-based organizations (Rankin, 2000),

• Participating in the *Lore of the Land* project, interviewing Navajo people and archiving oral histories related to sheep and weaving (Participant 01, personal communication, December, 2003),

• Organizing mini-Sheep is Life Celebrations that present a shorter version of SiLC topics to individual Navajo Nation chapters (Participants 01 and 08, personal communication, December, 2003),

• Collaborating with high school agricultural programs to educate youth on the importance of Navajo lifeways and to encourage them to pursue higher education and carry on Navajo traditions in the contemporary world (Diné be' iiná, Inc. 2004; SEDS, 2003).

*Sheep is Life Celebration*

Diné be' iiná sponsors and organizes the Sheep is Life Celebration (SiLC), its major annual event intended to “honor the central role that sheep play in Navajo spirituality, philosophy, and daily life” (Diné be' iiná, 2004). Four days of pre-celebration workshops offer hands-on instruction for working with wool or seminars related to livestock and land management, for which workshop attendees pay fees. Two days of workshops, presentations, discussions, and livestock shows—free and open to the public—focus on economic development and value-added marketing, range and livestock management, arts and crafts sales, agro-pastoralism, micro-enterprise, and using wool for fiber arts (Appendix N).

Diné be' iiná encourages ongoing cultural exchanges as a valuable component of the SiLC. Fiber artists have introduced Mongolian/Inner Asian felt-making techniques, for example, at a SiLC workshop (Tchir, 2002). In 2001, DBI hosted shepherds and cheese makers from the Island of Corsica, where there is an ancient sheep culture, as guest artists (Diné be' iina, 2001). Basque sheepherders were honored guests at the 2004 SiLC (Diné be' iiná, Inc., 2004).
The SiLC evolved from the Navajo Sheep Project's "Sheep and Wool on a Small Scale" conferences at Logan, Utah, in 1985 and 1990. At the request of Navajo sheep producers and weavers, the NSP collaborated with DBI, the Navajo Arts and Crafts Enterprises, Ganados del Valle, Tierra Wools, and Recursos de Santa Fe in 1997 to move the conference to San Juan College in Farmington, New Mexico, closer to the Navajo Nation (Robson, 1996; Sheep is Life, 1997). In 1999, DBI assumed responsibility for the SiLC and moved it to Diné College on the Navajo Nation where an estimated 800-1200 individuals participate annually (SEDS, 2003; Diné be' iina, Inc., 2004). Diné College is located at 7,000 feet elevation at the foot of the Chuska Mountains in Tsaile, Arizona, on the northeast rim of Canyon de Chelly at the junction of Highways 12 and 64. Diné be' iiná promotes the SiLC through radio and television coverage, posters, Web site, newspaper articles, and by word of mouth.

Accommodations and food services during the SiLC are available on campus, at nearby primitive campgrounds, or in Chinle, a 20-minute drive, and Window Rock, a 40-minute drive from Tsaile. Although many workshop instructors and attendees stayed in the college dormitories and brought food they could store in the dormitory kitchens, meals were also available on campus at the cafeteria, from local roadside vendors, and in restaurants and fast food outlets located in Chinle. In 2003, DBI initiated their first benefit awards banquet. The menu featured traditional Navajo foods, and entertainment consisted of a series of guest speakers, award presentations, music, and a fashion show. In 2004, DBI added their first

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16 In 2003, the banquet cost $20 per person in advance, $25 at the door. Kishani Catering Services, a Navajo company from Tuba City provided the meal. The menu consisted of roast mutton, blue corn mush, roasted chile, potatoes, corn on the cob, fry bread or tortillas, cake or fruit salad, Navajo tea, coffee, and punch. Speakers included Navajo
wool buy, paying higher prices for Navajo-Churro fleece, and a rug auction open to the public.

Workshops, presentations, and events in 2003 and 2004 illustrate the range of interests and attendees at the SiLC. Four days of pre-celebration workshops provided hands-on learning included such techniques as four-harness weaving, off-loom sash weaving, natural dyeing, felting saddle blankets, Navajo spindle spinning, beginning Navajo weaving, rope making, needle felting, and drop spindle spinning. Additional workshops focused on grazing management in arid lands and evaluation of the health of ecosystems. Primarily, Anglos from the Southwest and Midwest had enrolled in the workshops, though some advertised workshops were cancelled for insufficient enrollment. The majority of instructors were Navajo artisans. In addition, Navajo families or individuals arrived to visit workshops, at times carding, spinning, or weaving along with workshop attendees (Appendix O).

During the two days of the Celebration, events revolved around sheep and goat competitions, presentations, vendor booths, and shade house activities that emphasize the family. The content of vendor booths ranges widely from mutton stew to the promotion of such organizations as the Heifer Project, from imported Peruvian textiles to fleece and weaving tools, from handmade jewelry and Navajo hand weaving to Southwestern T-shirts. In 2003, the sheep and goat show held competitions for a variety of categories of Navajo-Churro sheep, Karakul sheep, and Angora goats (the source of mohair). Dr. Lyle McNeal and Judyth Chism judged the shows (Diné be' ííná, Inc., 2003). In 2002, one day of SiLC Nation President Shirley and Dr. Lyle McNeal, who received the Lifetime Achievement Award. Entertainment was a Navajo country western band, and the fashion show featured hand woven Navajo clothing. In 2004, former Navajo Nation President Peter MacDonald attended the banquet, and the fashion show consisted of Navajo-inspired clothing designed and marketed by a Navajo fashion designer.
presentations focused on the theme of land restoration, water conservation, and livestock health, including information about land management, the uniform grazing act, Navajo nation vet program, raising angora goats, farmers markets and community food security, sheep vaccines and nutrition, emergency animal care during drought, and the Black Mesa Water Coalition.

The second day of presentations emphasized the theme of selling sheep, wool, weavings, and farm products. Presentations included an overview of DBI, crops for Navajo farm production, farming and Navajo cultural values, Four Corners Marketing Network, how to sell wool and rugs, copyright issues for weavers, traditional foods for better health, the Navajo-Churro Sheep Association, wool grading and wool improvement, networking for selling mutton and lambs, Navajo rugs and restoration, the scrapies eradication program, sheep hoof trimming, sheep dog demonstrations, and ways to make a living from sheep with no water, grass, or electricity. Concurrent demonstrations in the shade house (a traditional Navajo sheep camp structure constructed of tree branches) included wool washing, spinning wheel spinning, drum carding, traditional foods, and sheep shearing with hand and electric shears. In 2002, the Museum at Diné College featured an exhibit of male Navajo weavers (Diné be’ iiná, Inc., 2002). Both Navajos and Anglos serve as presenters in their areas of specialization.

In March 2002, DBI conducted a pre- and post-SiLC mail survey that sought to identify ways DBI can increase participation in SiLC. The survey, in partial fulfillment of a grant from the Arizona Commission on the Arts, assessed the attitudes and opinions of 91 Navajo and non-Navajo respondents from the DBI mailing list. Results indicated that DBI needed to improve promotional outreach. Thirty-four percent of Navajo and 21% of non-
Navajo respondents found SiLC publicity clear and interesting; 39% of Navajo and 40% of non-Navajo respondents knew how to become involved with SiLC. Survey results also suggested respondents would like to have more opportunities to buy and sell sheep and wool at the SiLC. Respondents also expressed an interest in more educational presentations and programs that tell the story of Sheep is Life to diverse audiences (ABC Incorporated, 2003).

**Funding**

As volunteers, DBI members bear their own routine expenses for travel to meetings and programs. DBI charges fees for the pre-Celebration workshops, and the Diné be' iiná Web site includes information about ways to make tax-deductible donations (2004). Grants, however, support the majority of DBI programs. According to the DBI Administration for Native Americans (ANA) grant proposal (2003), previous grants have included:

- Pew Charitable Trust, the Indivisible Project in 2002, $10,000 to train Navajo people to record and archive their own culture, including oral histories about Navajo Sheep Culture;
- National Endowment for the Arts, Folk Art Program in 2000-2001, $35,000 to bring SiLC to the Navajo Nation and organized two SiLC field days; $10,000 Community Cultural Plan grant for a pilot study of collaborative organizations;
- Arizona Community Foundation in 1999-2000, $10,000 to survey Navajo wool producers and fiber artists about their economic development needs;
- La Pides Foundation in 1998, $5,000 to support SiLC cultural exchange programs;
- Arizona Commission on the Arts since 1998, $6,000 to assess SiLC audience development;
- Lila Wallace-Reader's Digest Community Folklife Program in 1997 and 1998, $15,000 each year to support SiLC;
- US Forest Service in 1997, $7,000 for agro-pastoral educational programs at SiLC;
- USDA Rural Development in 1995-96, $50,000 to develop a sewing center and training project, on its own since 2002.
Sheep is Life Economic Development Project

In 2003, a $350,000 Administration for Native Americans (ANA) grant funded DBI’s most ambitious project to date, the Sheep is Life Economic Development Project (SEDS). With their consulting resources,\(^{17}\) survey records (NAU, 1982), and contemporary interview data that identify common needs of Navajo agro-pastoral communities, DBI designed SEDS to address three key questions:

1) How can we increase income from Navajo sheep, wool, and fiber arts?
2) How can we create infrastructures to add value to our sheep and wool products?
3) How can culturally relevant, value-added enterprise revitalize our communities? (SEDS, 2003).

Although DBI invites people from throughout the Navajo Nation to participate, the ANA project focuses on 120 families who live in twelve targeted chapters in Arizona, Utah, and New Mexico that have concentrated populations of Navajo agro-pastoralists and fiber artists.

The ANA grant will pay for office space in Window Rock and salaries for two employees for three years. In October 2003, the DBI board of directors hired a full time project director (male) charged with carrying out fieldwork to build relationships and networks between DBI and people in the twelve selected Navajo chapters. In January 2004, DBI hired a three quarter time operations manager (female) to organize office space, track the budget, and work with the project director toward grant compliance. Both the new employees are Navajo, college-educated, and bilingual (Navajo and English).

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\(^{17}\) Heifer International, for example, is a key partner that trains community-based groups toward food security.
The grant supports the SiLC and develops programs for value-added processing and marketing of Navajo sheep, goats, wool, mohair, and fiber arts. The project intends to foster self-determination by:

1) Building capacity of Diné pastoralists, fiber artists, youth, and communities,
2) Connecting with resources and network with project participants,
3) Training grassroots people for local decision-making, and
4) Fostering sustainable, culturally relevant economic development at the family and community levels (SEDS, 2003).

DBI will measure success with specific results after three years. Along with increased community networks and funding from other resources, DBI anticipates the establishment of community supported training programs and small value-added businesses related to sheep and wool products in each of the twelve chapters; growth and retention of Navajo-Churro flocks; recognition of improved quality of Navajo-Churro meat and wool, both within and outside the Navajo Nation; increased youth involvement by 15% at the SiLC; adoption of a Sheep is Life school curriculum in at least 30 schools and community groups; and achievement of national and international status for SiLC as an arts and culture festival. The umbrella goal focuses on retaining value-added income with the Navajo people and supporting the Navajo sheep culture (SEDS, 2003).

With funding in place, DBI had met their goals to fill executive and advisory boards, hired two employees, rented office space in Window Rock, and launched its ANA community outreach program. This study profiles DBI at a critical point in their history. When field study began, DBI had achieved an opportunity to build their capacity as an
organization that gives voice to the Navajo sheep culture and promotes the restoration of Navajo-Churro sheep and wool.
CHAPTER FOUR: METHODS

Consistent with the purpose of this interpretive study, I selected the community-based organization Navajo Lifeways (Diné be’ iiiná or DBI) as the focus of my research. Research methods include review of primary, secondary, and tertiary historical and contemporary references; participant observation at DBI workshops and events; in-depth interviews with a purposive sample of DBI members; field notes and photography; and interviews with other individuals involved with DBI goals. This chapter describes the rationale for choices and procedures involved in conducting this study.

Selection of Diné be’ iiiná for the Study

For this study, I chose to focus on a community-based organization embedded in a culture other than my own. The process of gaining access and conducting research in another culture gave me experience and insight consistent with my career goal, to research and write about historical and ethnographic hand-made textiles and the artisans who produce them. Although based in another culture, DBI presented few language or geographic barriers to research. The DBI members in my purposive sample spoke fluent English and lived on or near the Navajo Nation, where I could travel in relative comfort and safety. Events sponsored by DBI on the Navajo Nation—the Sheep is Life Celebration (SiLC), pre-celebration workshops, and ‘spin-offs’ appeared to welcome non-Navajo people as participants.

The goals and activities of DBI were consistent with my research interests. I sought to understand ways that a community-based organization can influence a traditional fiber resource used for a hand-produced textile; DBI is a Navajo organization that seeks to restore and sustain Navajo-Churro sheep for wool used to weave traditional Navajo textiles. Exploring the relationship between artisans and a traditional fiber resource also interested
me; I knew some members of DBI owned Navajo-Churro sheep and used their wool for weaving. I intended to develop an inductively derived model to describe relationships among artisans, a traditional fiber resource, and a community-based organization; from the literature review, I learned that Navajo-Churro sheep and wool are linked with cultural identity among Navajo artisans. Perhaps equally important was the opportunity to contribute to an understanding of the sustainability of the organization itself; DBI members appeared willing to share experiences about sustaining their community-based organization.

**Duration of Study**

Research was carried out in four phases (See Table 3.1). **Phase 1** consisted of a preliminary literature review about Navajo-Churro sheep and wool, sustainable development, and tradition and change in handcrafts. During **Phase 2** in June 2003, I traveled to Diné College on the Navajo Nation, where I attended the annual Sheep is Life Celebration (SiLC) and four days of pre-celebration weaving and natural dye workshops. During **Phase 3** in December 2003, and January/February 2004, I traveled to the Navajo Nation for additional interviews and further observation and research. I interviewed DBI members, observed a DBI meeting, conducted research at the Navajo Nation Library, and talked with individuals in supportive roles with DBI. During **Phase 4**, I returned to the Navajo Nation to attend the SiLC, demonstrate hand knitting, and present my research findings to the Executive Board. These repeated visits allowed me to keep in touch with DBI members and to observe DBI activities over a one-year research period from June 2003 through June 2004. The schedule for the SiLC, pre-celebration workshops, meetings, and the monthly spin-off determined my fieldwork schedule, along with the time required to obtain research permissions from DBI and the Navajo Nation.
Table 4.1 Fieldwork schedule.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Time</th>
<th>Activities</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Summer, 2003</td>
<td>Participant observation at the SiLC and workshops Proposal to DBI executive board</td>
<td>Diné College, Tsaile, AZ</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Summer/Fall, 2003</td>
<td>Literature review Permissions obtained from DBI, Navajo Nation Historic Preservation Department, and Iowa State University Internal Review Board</td>
<td>Ames, IA</td>
</tr>
<tr>
<td>Phase 3</td>
<td>December, 2003</td>
<td>In-depth interviews with DBI executive board members Navajo Nation Library research</td>
<td>Chinle, AZ, Ganado, AZ, Ttec Nos Pos, AZ, Window Rock, AZ</td>
</tr>
<tr>
<td></td>
<td>January/February, 2004</td>
<td>In-depth interviews Participant observation at DBI meeting Participant observation at a spin-off Navajo Nation Library research</td>
<td>Chinle, AZ, Farmington, NM, Ganado, AZ, Table Mesa, NM, Tsaile, AZ, Two Gray Hills, AZ, Window Rock, AZ</td>
</tr>
<tr>
<td>Phase 4</td>
<td>June 2004</td>
<td>Dissertation presentation at the SiLC Knitting demonstrations</td>
<td>Diné College, Tsaile, AZ</td>
</tr>
</tbody>
</table>

Fieldwork Preparation

Before fieldwork was begun, a preliminary review of literature acquainted me with the history and culture of the Navajo people and the significance of Navajo-Churro sheep to Navajo textiles. The majority of previous research and publications emphasized Navajo linguistics, education, economics, and social structure. I reviewed the literature for references to Navajo-Churro sheep in Navajo culture and weaving, a topic that appeared to receive substantial popular attention but less interest among scholars.

When I first attended the Sheep is Life Celebration and pre-celebration workshops, I had the opportunity to meet members active in DBI. During the workshops, banquet, fashion show, presentations, and livestock judging, I talked with Navajo and non-Navajo weavers,
spinners, shepherders, and teachers. I stayed in the same residence hall as my weaving teachers, and at times we ate meals and talked together. I initiated one-on-one discussions about my research interest in DBI. During one such conversation, the DBI secretary suggested she add my research proposal to the agenda for the executive board meeting scheduled on the last day of the SiLC. At the meeting, I described my research interest to the board members, who requested a written proposal that would give all voting members an opportunity to review the proposal and express their opinions.

After I returned from the Sheep is Life Celebration, I followed up my proposal presentation at the DBI meeting. Suzanne Jamison provided names and addresses for executive and advisory board members. In July, I emailed or sent by post a revised dissertation proposal to each of seven executive (voting) and nine advisory (non-voting) board members for their consideration at the August board meeting. In September, the DBI president mailed a letter that documented DBI support for my proposal (Appendix E).

*Interview Document*

An interview protocol was designed keeping in mind three basic goals (Appendix A). First, some questions requested demographic information that would describe the population of participants. These questions were intended to provide a snapshot description of DBI membership at the time of the study. Second, a series of open-ended questions requested more reflective responses about personal and cultural experiences related to restoring Navajo-Churro sheep and wool and to making Navajo textiles. These questions were intended to provide insight into the deeper rationale that motivated DBI members to volunteer their time with this particular organization. Third, a series of questions about capabilities, driven by community based sustainable development models of Chambers
(1983, 1997) and Sen (1993, 1997), asked for specific economic, social, and ecological indicators of sustainability. These were intended to probe for information about sustaining Navajo-Churro sheep as a traditional fiber resource and about sustaining DBI as a community-based organization. The interview document used for research with Marketplace: Handwork of India inspired the format.

Research Permissions

Conducting research on the Navajo Nation required permission and support from DBI, the Navajo Nation Historic Preservation Department, and the Iowa State University Office of Research Compliance. After I received the letter of support from DBI, I submitted my application to the Iowa State University Institutional Review Board for a Human Subjects Research Review Study. My application to Iowa State University included the interview schedule, Informed Consent Document (Appendix B), and Informed Consent for Minor Document (Appendix C). I received approval (Appendix F) without revisions to any documents. At the same time, I requested permission from the Navajo Nation Historic Preservation Department for a Navajo Nation Class C permit to conduct non-collection personal research on the reservation. I received initial approval to conduct research during 2003, followed by approval for the first six months of 2004 (Appendix G). In addition, I prepared a standard release form that grants permission to photograph and to publish photographs, which I obtained signatures from those participants I photographed during the study (Appendix D).

Business Cards

Business cards provided a means of lending an official quality to research in the field. Business cards that identified me as a graduate student and research assistant were printed
using the Iowa State University format and included my name, department, college, address, telephone number, and email address. Often I wrote my cell phone number and home address on the back of the card. I paper-clipped a business card to each participant's copy of the Informed Consent Document, and I gave cards to those who provided supportive interviews.

Data Collection

The majority of data was collected during fieldwork carried out on or near the Navajo Nation between June 2003 and February 2004. Personal tourism travel on the Navajo Nation during the previous 20 years had given me a comfortable familiarity with the roads, population centers, accommodations, and weather conditions on the reservation.

*Sheep is Life Celebration 2003*

I drove to the Navajo Nation to attend pre-Celebration workshops from June 23-26 and the SiLC on June 27-28, 2003. During four days of pre-celebration workshops held in the weaving studio at Diné College, I studied Navajo four-harness weaving, off-loom sash weaving, and natural dyeing with both indigenous plants and historically relevant imported dyes. Few people signed up for the one-day, four-harness weaving class, so my three teachers, all Navajo women, were especially attentive. They taught by demonstration. Each showed me a procedure—warping, tying heddles, tapestry weaving—and then left me to practice on my own. Unaccustomed to this teaching technique, I felt slow and clumsy. We talked while we wove, and the conversations ranged from the Navajo Long Walk to coping with a rattlesnake that slithered too near a hogan.¹

¹ First, give the snake a chance and say, "Don't you know this is someone's home? You don't belong here. Go away." Usually, the snake leaves. If it does not leave, then kill it.
In the weaving studio, upright looms crowded the room, and Navajo families, often three generations of women, drifted in and out of the studio to card, spin, or weave with wool. Workshop students had the opportunity to interact, although the Navajo elders seldom seemed to speak English. Everyone shared materials, often without asking permission.

Children who accompanied mothers rarely spoke but watched or concentrated on their own weaving. Two days of the natural dye class were also carried out in the weaving studio, so I worked on my four-harness weaving for two more days. On the fourth day of pre-celebration workshops, more students arrived—Navajo and non-Navajo—for the off-loom weaving class.

As the Sheep is Life Celebration approached, Navajo and non-Navajo sheepherders, weavers, vendors, and livestock arrived on the Diné College campus. A traditional Navajo shade house, a shelter canopy built of leafy branches, appeared overnight for a comfortable, cool space to prepare wool, spin, weave, and demonstrate natural dyes. Rows of vendors on either side of the central walkway through campus set up canvas canopies or tailgates.

Vendors sold fleece and yarn, spinning and weaving equipment, Peruvian handcrafts, natural dyes, coyote-resistant sheep collars, jewelry, hand woven cinches, and mutton sandwiches and stew. Heifer International advertised memberships and services. Stock pens held sheep and goats that bleated endlessly.

Presentations under a canvas canopy and inside a nearby building focused on marketing, herd health, and sheep shearing. An estimated 400 people appeared to follow their interests as they drifted among various presentations, vendors, and livestock. I attended a representative range of topics and typed notes during the evenings. During my participation in the SiLC and the pre-celebration workshops, DBI members grew to recognize me for our
shared interest in working with fiber. By the time I traveled to the Navajo Nation for interviews in December 2003 and January/February 2004, members of DBI knew me as a researcher, writer, and artisan (especially a knitter).

Participants

A purposive sampling method was used in this study. By definition, purposive samples are drawn to represent a full range of responses with as little redundancy as possible, and participants are selected who will support the objectives of the study (Lincoln and Guba, 1985). Consistent with a study that explores ways that DBI influences the restoration of Navajo-Churro sheep, I interviewed the seven voting members of the DBI executive board (president, vice-president, secretary, treasurer, parliamentarian, and two directors). I also interviewed five members of the advisory board, including one youth advisor. To balance my perspective, I interviewed a former DBI president, DBI’s project manager at the time (their first employee), and a weaver who was new to the organization. Two participants were founding members who had firsthand experience with the origin of DBI. The youth advisor provided a viewpoint on emerging leadership, and the new member suggested factors that attracted Navajo weavers and spinners to the organization. I also had the opportunity to conduct six supporting interviews that broadened my understanding of the context for the study.

Interview Procedure

I interviewed four key members of the executive board: the president, secretary, treasurer, and a director during my second visit to the Navajo Nation in December. Case studies about fieldwork settings and ethnographic research guided my body language, time pacing, verbal reactions, and choice of interview settings (Grills, 1998; Spradley, 1979).
Whenever possible, I conducted interviews at each participant's home or workplace. I interviewed the president in a school classroom where he teaches wool processing, felting, and weaving. I interviewed the secretary and an advisory board member at their offices, and the treasurer in her home. Duration of interviews ranged from 45 to 90 minutes and accommodated the length of response from each participant. With permission, I tape recorded each interview.

After I returned from fieldwork in December, I transcribed the four interviews and pooled the data by interview questions. An initial analysis of data based on the constant comparative method suggested emerging themes of ideological commitment to Navajo cultural identity based on sheep and wool, outreach to the Navajo Nation population, and educational channels used to convey knowledge about Navajo-Churro sheep and wool. The data suggested education took place on three levels: (1) board members learned to run an organization, (2) the Navajo people re-learned the history and significance of Navajo-Churro sheep, and (3) outside collectors learned the history and cultural significance of Navajo-Churro sheep and wool. I needed further information, however, about the economic and cultural significance of Navajo-Churro sheep to the participants. To correct this, I added notes to probe for this information in questions 11, 15, and 16. I also noted that, although all four of the participants described similar purposes and goals for DBI, none claimed knowledge of its origin in 1991.

In January and February 2004, I returned to the Navajo Nation to conduct additional interviews and further research at the Navajo Nation Library. I timed my fieldwork to coincide with a 'spin-off' scheduled at the Two Gray Hills Trading Post. A spin-off is a monthly social and work gathering, sponsored by individual DBI board members, intended to
encourage communication among weavers, spinners, and shepherders. Heavy snowfall with poor visibility limited attendance to eleven people who lived near the trading post (within 70 miles and on the east side of the Chuska Mountains). The participants, predominantly Navajo women, gathered one-by-one during the afternoon to work on individual projects. The variety of spinning and weaving equipment—Navajo spindles, drop spindles, spinning wheels, a drum carder—stimulated lively comparisons of methods and products. I improved my spinning technique with the Navajo spindle. During the spin-off, I scheduled interviews with four weavers residing within 60 miles of one another on or near the Navajo Nation in New Mexico.

After I returned to Window Rock from those interviews, I attended a one-day DBI executive board meeting where I could learn about meeting dynamics. During the meeting, board members interviewed and hired an officer manager, their second employee, and reviewed their current grant with their project manager. After the meeting, I interviewed an advisory board member who had been appointed chair of a newly formed oversight committee, intended to streamline DBI communication with their new employees. I also scheduled more interviews for the following week. Another snowstorm moved into the mountain region where some participants lived or worked, and I conducted and recorded the last four interviews by telephone after I returned from fieldwork.

During my time on the Navajo Nation, I also conducted supporting interviews, each more or less serendipitous. Les and Irma Wilson at Two Gray Hills Trading Post hosted the spin-off I attended. Mr. Wilson, the trading post licensee, provided an insightful interview about the history, politics, and relevance of Navajo-Churro sheep and wool to Two Gray Hills style weaving. I talked with Clark deSwihenitz, an attorney from Santa Fe, when he
attended the DBI executive board meeting. Suzanne Jamison, a consultant experienced with nonprofit organizations, encourages DBI membership and has written the grants that fund DBI activities. She was working in Window Rock on another project during January, and she found time to meet with me one morning to discuss her in-depth historical perspective about DBI. She also gave me inside documents, primary evidence about DBI by-laws, grant proposals, and SiLC surveys.

Other resources on the Navajo Nation were helpful. When I stopped at the Navajo Nation’s Division of Economic Development for copies of economic data specific to the Navajo Nation, I talked in depth with Trib Chaudhary. A principal economic development specialist, Chaudhary discussed the sheep, wool, and weaving economy and provided inside documents related to Navajo Nation wool marketing efforts. Ron Maldonado, Chief Archaeologist for the Navajo Nation Department of Historic Preservation, discussed his experiences working within the Navajo culture and political arena. At the Navajo Nation Department of Agriculture, extension agent Ray Castillo described record keeping for sheep and wool on the Navajo Nation and a current crossbreeding program intended to upgrade Navajo sheep for off-reservation sale of feeder lambs and wool.

The greatest challenge in conducting research was finding effective ways to communicate and schedule interviews with participants. Postal mail is delivered only to post offices boxes on the reservation, and individuals may not be able to pick up mail every day. Some participants had computers with email at work, but not at home; others checked email on home computers daily. Some checked email only sporadically, and a few had no computer access. All participants had home phones, but some had no answering machines while others had voicemail messages in Navajo. One participant told me that her sister, another potential
participant, could dial calls from her phone, but she could not receive calls. Most participants had cell phones, although cell phone usage consisted of an unpredictable mosaic of coverage on the reservation. When out of cell phone range, I relied on pay phones at trading posts and convenience stores. In short, each participant required a specific method of communication. For example, one participant maintained a web page and checked email daily, and I arranged his interview by email the week before entering fieldwork. Another participant, on the other hand, welcomed my unannounced visit to his school classroom and granted an interview between classes. My experience contributed sobering insight into the difficulties DBI has faced at times when scheduling and informing members about meetings, events, and progress on assigned projects.

*Photographs.* Photographs were taken of participants with their looms, spindles, fleece, or sheep when possible. In all cases, permission was obtained and the participant signed the Standard Consent to Photograph Document (Appendix D). Some participants kept sheep on their grazing permit land some distance from home and work. No participant who was asked declined to be photographed.

*Research in Window Rock.* During days with no interviews, I searched materials at the Navajo Nation Library in Window Rock, Arizona. I reviewed and photocopied tribal documents and books about Navajo weaving, economics, and sheep in the general collection and the American Indian Research Library. In addition, from the Navajo Nation Division of Economic Development, I obtained the publications *2002-2003 Comprehensive Economic Development Strategy of The Navajo Nation* and *Navajo Nation Data from Census 2000*, the most recent copies of demographic information generated on the Navajo Nation.
Field Notes

I kept a daily journal during my time on the reservation. I wrote abbreviated notes immediately following an interview, activity, meeting, or other interaction. In the evenings, I typed and amplified the notes. I did not take notes during in-depth interviews with participants; taking notes would have distracted me from each participant’s responses. Instead, I tape recorded each interview. I did take extensive notes during the DBI meeting and supporting interviews, however, and typed these into my journal. Personal reflections were typed in italics to distinguish them from descriptive notes.

Sheep is Life Celebration 2004

In June 2004, I traveled to the SiLC for two days as a presenter. The advisory board member charged with organizing the 2004 SiLC asked me to present a talk about my dissertation and to demonstrate hand knitting in the shade house. My talk summarized the major and minor themes of my research findings. For the knitting demonstration, I prepared a handout on the history of knitting world wide, including Navajo knitting. I also designed and knitted a small bag with Navajo-Churro wool, and I provided copies of the pattern. Examples of hand knitting from Peru and the Baltics attracted attention, and two little Navajo girls asked me to teach them basic knitting stitches. Unfortunately, an intense windstorm forced the fiber demonstrations to close mid-afternoon on the second day of the celebration.

Data Analysis

Data analysis procedures were based on the constant comparative methods of coding and interpretation of data (Glaser, 1992; Glaser & Strauss, 1967). Recorded interviews were transcribed verbatim, nine by the researcher and six by a transcriber with 20 years
experience. I reviewed each recorded interview and, if needed, made corrections.

Transcribing produced fifteen extensive interview sets.

Coding

Data analysis began after the first interview and continued throughout the collection period. Open coding was used in the first stage of analysis to discover broad categories of information (Glaser & Strauss, 1967). Data from questions that yielded demographic information about the participants—Questions 6, 7, 8, 9, 10, 11, 17, and 19—were pooled in tables and describe the population sample in Chapter Five. Data from questions that yielded information about DBI—Questions 2, 3, 4, and 5—were treated as findings and are discussed in Chapter Five. Data from questions that requested a greater degree of subjective interpretation—Questions 1, 12, 13, 14, 15, 16, 18, 20, and 21—were coded, and a coding guide was developed for each question.

The development of coding guides relied on the concept of theme as a way to capture and interpret categories of meaning (Manen, 1990). Initially, major themes were identified and data that held similar ideas were sorted into categories. Major themes were sub-divided into minor themes and sub-themes. Each major and minor theme was constantly compared with previous themes and refined accordingly. Themes were given names and numerical codes in a coding guide developed specifically for each question.

Inter-Rater Reliability

Coding guides for questions 1 and 12 were selected to establish inter-rater reliability. These two questions had yielded the most interpretive responses. Participants tended to veer from the immediate topic during interviews, so I highlighted sections of interviews most relevant to each question. I also marked those quotations that supported each major theme,
minor theme, and sub-theme. An independent rater experienced in qualitative data analysis used the coding guide to code the highlighted quotations and achieved a 96% agreement rate with my coding. The reliability rating was calculated using the formula:

\[
\frac{\text{number of agreements}}{\text{number of agreements} + \text{number of disagreements}}
\]

After inter-rater reliability was established, I coded all the remaining open-ended questions.

*Development of Emergent Themes*

After the initial coding of each question, the coding guides were pooled according to similar associations. Major themes, minor themes, and sub-themes were identified as they emerged from the data. Participant observations in field notes, evidence from supportive interviews and documents, and interview responses were searched for the most salient data that supported each theme. The data grouped into four over-arching, major themes. The first theme included data related to the context of the study, information that pertained to cultural identity. The second theme focused on product and included data specific to aesthetics, quality, craftsmanship, and technology involved in production. References to participation in a range of educational programs formed the third theme related to process. The fourth theme provided the structure, and included the participants’ observations about DBI as an organization that supports the first three themes.

After the four major themes were identified, each was examined for more specific commonalities. Each minor theme was assigned a name and numerical code. Additional clusters of similar concepts with a minor theme were designated sub-themes and given names and numerical codes. Appendix H demonstrates theme development for minor themes and sub-themes for the two major themes of *Cultural Product* and *Organizational*
Sustainability. Discussion and comparison of theme development led to the final coding guide (Appendix I). Development of the emergent themes began with concrete concepts and moved toward increasingly abstract categories. The next chapter will provide evidence for these findings.
CHAPTER FIVE: RESULTS

Initial analysis of data reveals four over-arching themes. Data about cultural identity provide context for the study, about craftsmanship describe unique cultural products, and about educational channels enlighten the process of culture change. Data about sustaining a community-based organization lay the structure for the first three themes. Minor themes and sub-themes represent the range of ideas embedded within the four over-arching themes (Figure 5.1). These inductively generated themes illustrate ways that Diné be' iiná (DBI) uses educational channels to promote the restoration of Navajo-Churro sheep and wool as a component of Navajo cultural identity and as traditional Navajo cultural products.

This chapter is organized into five sections. The first section will describe the demographics of the sample population, the 15 participants who contributed in-depth interview data. The second section will summarize the participants' involvement with DBI. Interview data, intimately linked with the cultural experiences of participants as artisans and sheep producers, revealed a context in which to view the data. The third section, therefore, will discuss the influence of Navajo-Churro sheep and DBI on the participants' lives, organized according to themes of cultural identity, cultural product, and education. The fourth section will describe a fourth theme of strategies that support and sustain DBI as a nonprofit, community-based organization. The fifth section will describe an emergent, inductive model that depicts the broad scope of relationships among Navajo artisans who use Navajo-Churro wool, DBI board members, educational channels, and community and family interactions.
Cultural Identity (Context)
- Navajo-Churro breed
- Awareness of breed
- Agro-pastoral heritage
- Traditional life learning
- Family cohesion
- Gender
- Language

Unique Cultural Products (Product)
- Natural colors
- Wool characteristics
- Value-added
- Social interaction

Educational Channels (Process)
- Convening
- New connections
- Resource networks
- Board member education
- Outreach to Navajo people
- Intergenerational communication
- Economic return
- Outreach to non-Navajo markets
- Political activity

Sustain Organization (Structure)
- Committed leadership
- Community outreach
- Ethical standards
- Fund raising
- Board member capabilities

Figure 5.1 Major and minor themes

Demographics

*Demographics for the Sample Population*

The sample of 15 DBI members consisted of Navajo people, with the exception of one Mexican-American who had immigrated to the United States as a child and who lives and works on the Navajo Nation. Twelve participants (80%) resided on the Navajo Nation, two lived less than 30 miles from the reservation, and one attended a university in the Southwest. All participants spoke fluent English, thirteen spoke Navajo, one spoke Spanish, and another was learning Navajo. Participants described different proficiency levels in speaking and writing the Navajo language. Participants were affiliated with different Navajo
Nation chapters, including Cornfields, Forest Lake, Ganado, Jeddito, Lukachukai, Red Valley, Rock Point, Tsaile/Wheatfields, Pinon, Shiprock, and Teec Nos Pos.

Participants varied in gender, age, marital status, family size, education, and occupation (See Table 5.1). The ten women (66.7%) and five men (33.3%) ranged in age from 27 to 58 years ($M = 41.3$ years). The women were slightly older ($M = 41.9$ years) than the men ($M = 40.2$ years). Married participants ($M = 42.7$ years) were older than single participants ($M = 39.3$ years). Two participants were in their twenties (13.3%), five in their thirties (33.3%), five in their forties (33.3%), and three in their fifties (20.0%). Among the women, three of ten (33.3%) were single (never married), one was married but legally separated, and one was divorced; among the men, three of five (60%) were single (never married). Female participants tended to have larger families than male participants; the mean number of children for women ($M = 2.4$ children) was greater than that for men ($M = 1.8$).
Table 5.1 Demographics for in-depth interview participants\(^1\)
Source: author’s survey, 2003-2004

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number of Participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>66.7%</td>
</tr>
<tr>
<td>Male</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
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<td></td>
</tr>
<tr>
<td>Single, never married</td>
<td>6</td>
<td>40.0%</td>
</tr>
<tr>
<td>Single, divorced</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Married</td>
<td>7</td>
<td>46.7%</td>
</tr>
<tr>
<td>Married, separated</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>4</td>
<td>26.7%</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>20.0</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>6.7</td>
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<tr>
<td>3</td>
<td>1</td>
<td>6.7</td>
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<tr>
<td>4</td>
<td>5</td>
<td>33.4%</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 to 29</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>30 to 35</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>36 to 39</td>
<td>3</td>
<td>20.0</td>
</tr>
<tr>
<td>40 to 45</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>46 to 50</td>
<td>3</td>
<td>20.0</td>
</tr>
<tr>
<td>51 to 55</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>56 to 60</td>
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<td>6.7</td>
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<tr>
<td><strong>Highest level of education attained</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
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<td>20.0%</td>
</tr>
<tr>
<td>High school diploma</td>
<td>1</td>
<td>6.7</td>
</tr>
<tr>
<td>Associate degree or some college</td>
<td>2</td>
<td>13.3</td>
</tr>
<tr>
<td>Baccalaureate degree</td>
<td>6</td>
<td>40.0</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>3</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

\(^1\) N = 15. Due to rounding, percentages in each category do not always equal 100%.
Table 5.1 (continued)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number of Participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation (full time)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td>Weaving/sheep and wool</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>Traditional healing practitioner</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Licensed practical nurse</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Homemaker</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Community planner</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>College registrar</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>School counselor</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Student</td>
<td>2</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

Sheep Herding Experience

| Learned during childhood | 14 | 93.3% |
| Own sheep now            | 11 | 73.3% |

Weaving Experience

| Learned as adult | 6 | 40 |

All participants had attended school and, in general, worked in occupations commensurate with educational level. The majority had earned baccalaureate or graduate degrees (eight participants or 53.3%) with majors in agricultural business, animal science, counseling, distributed studies, education, or environmental sciences. Among those participants with degrees, three (20%) held a master's level degree, two (13.3%) had associate degrees (one in business, the other in practical nursing), and one had completed three years of college as an English major. The M.S. candidate was enrolled in her final year of studies; the participant accepted into graduate school planned to study business. Among the three participants (20%) without a high school diploma, one had attended school for twelve years but an error in credits transferred between schools had barred her graduation.
Another had dropped out of high school but expressed interest in pursuing a high school equivalency certificate. The range of occupations included work in the wage economy, the informal economy, or some combination. Teaching full time was the most frequent occupation (three participants or 20%). In addition, two participants who worked full-time as weavers and sheepherders also taught weaving and other fiber arts.

Demographics for the Executive Board

The seven participants who compose the DBI executive board occupy positions of leadership as voting members. To determine if individuals who had accepted this level of responsibility differed from the population sample as a whole, demographic characteristics were calculated specifically for executive board members (See Table 5.2). Mean age for executive board members ($M = 41.6$ years) approximated that of the population as a whole ($M = 41.3$ years). A larger percentage of executive board members (four of seven or 57.2%) held a baccalaureate degree compared with the population sample (six of fifteen or 40%).

The cumulative percentage for those who held undergraduate and graduate degrees, was close in value between the executive board (four of seven or 57.2%) and the population sample (eight of 15 or 53.3%). Similarly, the cumulative percentage of executive board members who had attended college at all (five of seven or 71.4%) was close in value to that of the population as a whole (eleven of 15 or 73.3%). Marital status, occupation, and numbers of children were similar in both populations. This comparison indicated that, with the exception of baccalaureate degrees, the demographics for executive board members represent the population sample as a whole. The second section of this chapter presents findings derived from the 15 in-depth interviews.
Table 5.2 Demographics for executive board participants\(^2\)
Source: author’s survey, 2003-2004

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>71.4%</td>
</tr>
<tr>
<td>Male</td>
<td>2</td>
<td>28.6%</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single, never married</td>
<td>2</td>
<td>28.6%</td>
</tr>
<tr>
<td>Married</td>
<td>4</td>
<td>57.1%</td>
</tr>
<tr>
<td>Married, separated</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>2</td>
<td>28.6%</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>28.6%</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 to 29</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>30 to 35</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>36 to 39</td>
<td>2</td>
<td>28.6%</td>
</tr>
<tr>
<td>40 to 45</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>46 to 50</td>
<td>2</td>
<td>28.6%</td>
</tr>
<tr>
<td>51 to 55</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Highest level of education attained</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some high school</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>High school diploma</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Associate degree or some college</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Baccalaureate degree</td>
<td>4</td>
<td>57.2%</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher</td>
<td>2</td>
<td>28.6%</td>
</tr>
<tr>
<td>Weaver</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Administrative assistant</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Planner</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>College admissions counselor</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Graduate student (accepted to program)</td>
<td>1</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

\(^2\) N = 15. Due to rounding, percentages in each category do not always equal 100%.
Involvement with DBI

The second section will summarize participant involvement with DBI, link their cultural experiences as artisans and sheep producers with their involvement in DBI, and establish a context in which to consider interview data.

Position in DBI

Individuals who had served in leadership roles with DBI composed the primary though not exclusive sample for this purposive study. The seven current executive board members and five of nine advisory board members were interviewed. A past president no longer active in the organization, a new DBI member who had attended only four events, and DBI’s newly hired project director (a salaried position) were also interviewed. Among these participants, two were founding members who contributed historical perspective about DBI. Table 5.3 summarizes each participant’s position and experience in DBI, source of initial contact, round trip travel time for DBI meetings and events, and the people who most influenced the decision to join DBI.
Table 5.3 Involvement with DBI among in-depth interview participants³
Source: author’s survey, 2003-2004

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number of Participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Position with DBI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive Board</td>
<td>7</td>
<td>46.6%</td>
</tr>
<tr>
<td>Advisory Board</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td>Past President</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Employee</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Attended events</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td><strong>First learned about DBI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From family/friends</td>
<td>8</td>
<td>53.3%</td>
</tr>
<tr>
<td>Media (flyers/newspaper/radio)</td>
<td>4</td>
<td>26.7%</td>
</tr>
<tr>
<td>At the SiLC</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Anonymous postcard</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>From a teacher</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td><strong>Greatest influence to join</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suzanne Jamison</td>
<td>6</td>
<td>40.0%</td>
</tr>
<tr>
<td>Family</td>
<td>5</td>
<td>33.3%</td>
</tr>
<tr>
<td>Weaving teachers</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>Lyle McNeal</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Personal interest</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td><strong>Years with DBI</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 year or less</td>
<td>4</td>
<td>33.3%</td>
</tr>
<tr>
<td>2-5 years</td>
<td>6</td>
<td>40.0%</td>
</tr>
<tr>
<td>6-9 years</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>10 years or more</td>
<td>3</td>
<td>20.0%</td>
</tr>
<tr>
<td><strong>Maximum time for travel</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 hour or less</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>2-3 hours</td>
<td>8</td>
<td>53.3%</td>
</tr>
<tr>
<td>4-5 hours</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>6-7 hours</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Extensive</td>
<td>3</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

³ N = 15. Due to rounding, percentages in each category do not always equal 100%.


Years with DBI

The length of involvement in DBI ranged from three months to 13 years (M = 5 years). A larger percentage of participants (73.3%) had been involved with DBI for more than one year than had been involved for one year or less (26.7%). Cumulative experience with DBI totaled 74.8 years.

Initial Contact

All the participants remembered specific ways they first learned about DBI. Among the eight participants (53.3%) for whom family or friends provided the initial contact, a founding member recalled:

One of my clan relations, one of my cousins, at the time she was involved with DBI. I guess it was quite small, and she was trying to recruit. So one day she said, “Hey, we’re having this meeting.” And she loaded up... some of my relatives and we headed out to Ganado. That’s how we got involved. (07)

Family members had described their own involvement with DBI to other participants:

I was going to college, so my life wasn’t here at ______. My life was elsewhere. During my breaks, I’d come home and my mother would tell me they’d attended the Sheep is Life Celebration the time it was being held in Farmington. I started hearing about DBI through the Celebration. (08)

For three other participants (20%), flyers posted to advertise the SiLC had attracted their attention:

I saw a flyer at some bulletin board somewhere. The flyer said a celebration, sheep demonstration, care, wool demonstration, and I thought, “Wow. This is cool. I’ve got to make it up there.” So I made sure I was there. This was about five years ago. Ever since then I’ve been a participant. (04)

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4 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.
In some instances, participants learned about DBI in several different ways. An advisory board member recalled seeing SiLC advertisements but also heard from family:

> My mom actually had heard about it [SiLC] around the same time, too, because they have announcements in *The Navajo Times* and the *Gallup Independent*. They talk about all the different things regarding the programs. I just took a natural interest in it. I just really wanted to be a part of different organizations, anything that was agricultural-based. (11)

The SiLC in Tsaile drew one participant, a Tsaile resident, to get involved with DBI. Another described simply wandering into the SiLC at Farmington after hearing a radio promotion for a weaving seminar. An anonymous invitation to a DBI meeting appeared on one participant’s desk at work, and a teacher had told another about DBI.

**Influential People**

Participants also recalled specific people who had encouraged them to get involved with DBI. More participants (40%) attributed their involvement in DBI to Suzanne Jamison, the consultant described in Chapter Three, than to any other source. An executive board member who credited Suzanne as a significant influence recalled:

> I got to know Suzanne, and . . . I was influenced by her: the knowledge that she had, the contacts she had, the network she had with different people and organizations. It was through her that I got to know everybody on the Board, the members that already had gone to previous meetings. Yeah, she’s the one that influenced me. (02)

Another executive board member described Suzanne’s persistent contacts over several years that kept him informed about DBI meetings and events:

> Suzanne had somewhere—I don’t know where—gotten a hold of my contact and had sent me a little postcard telling me about the celebration. I remember the first year I couldn’t attend, and then the second year I did. That’s the year she invited me, me and my family, to come and be a demonstrator. She set that up for me. It was a very fun, informative type of Celebration that we attended as a family. I’ve always been interested in the ongoing progress, but unfortunately, it didn’t continue that way until, I would say maybe three years ago. I received another postcard from Suzanne that they [DBI] were regrouping and were going to hold a meeting at the Chinle High
School Agriculture Department. If you're interested in being part of the group or are just curious about it, come over and this is when we're meeting. (01)

Family proved the greatest influence for five participants (33.3%). An advisory board member said that “most of all I was influenced by my mom. She wanted to be a part of the organization. I went with her and wanted to see what it was all about.” (11) Weaving teachers influenced two others (26.7%). An advisory board member credited an influential weaver:

Yes, for me it was ______. He’s a fellow weaver . . . and we’ve talked before I joined DBI. We’ve had a lot of conversations about our experience managing our sheep, being a weaver, being a spinner, working with the fiber. He was the one that influenced my involvement because he nominated me. He told me a little bit about DBI, and I became interested in that way. (08)

A founding member credited Lyle McNeal and the Navajo Sheep Project, plus her own interest in helping her family. Another participant attributed the greatest influence to her own dedication to DBI’s mission.

**Time and Driving Distance**

The DBI meetings and events each participant attended, plus estimates of time and driving distance, indicated individual commitment to the organization. Every participant had attended at least one DBI event during the year of the study. The amount of time devoted to DBI, however, varied considerably among the participants. Eleven participants (73.3%) struggled to calculate the amount of time they had worked:

This is hard. I'm trying to think. I would probably say... I know June is the month I'll be really busy with Sheep is Life, and I'm there about 10 hours a day. Probably 30 days, 30 to 60 days that I'm involved with Sheep is Life or DBI: the planning, the meetings, our meetings take all day. (02)

I'll say March to June, the end of June was like every day. The phone would be ringing. I'll be calling or helping somebody out. Then other times it was like maybe three times a week. Then if there's meetings, it is usually on Friday evening or on the weekends. Depends. Then the conferences, meetings, and workshops we went to. Sometimes we went to grant writing meetings. So that took up a lot of my time. (13)
For two participants (13.3%), DBI meant full time work, and another two participants worked only with the SiLC. Individual responsibilities varied from year to year as well. The SiLC coordinator during the year of the study, for example, was “spending at least an hour a day, maybe two hours a day.” (08)

Although participants found it difficult to determine the quantity of time spent on DBI, they could estimate travel time for meetings and events. For this reason, Table 5.3 shows only the maximum time participants traveled round trip for DBI meetings and events. All participants agreed that DBI involvement required substantial time for driving. All but one described driving two or more hours round trip to attend a DBI meeting or event. More than half the participants (53.3%) drove an estimated two to four hours, or between 60 and 150 miles, round trip. A participant who lived on the east side of the Chuska Mountains said:

I have to travel at least an hour and a half, sometimes two hours one way. Most of the meetings are closer to the central Navajo Nation, and I’m from the northern Agency. I feel like I really put the effort into it because I live one of the farthest. As an Advisory member, I didn’t have to be there, but I made an effort to be there because it was important to me. (08)

Icy roads, intense wind, and low visibility during blizzards and sand storms created hazardous driving conditions—and longer driving times—on and near the Navajo Nation.

Interview data also revealed the understanding that participants held about DBI history, membership, board qualifications, and decision-making procedures. In addition, participants described individual experience with sheep and weaving that preceded their involvement with DBI. They also reflected on motivations to join and intentions to continue membership in DBI. This section ends by comparing interview data gathered about the executive board members with the sample population as a whole.
History of DBI

Eleven participants (73.3%) indicated they were unaware of specific events happening in 1991 that led to the formation of DBI:

I wasn’t here in 1991. I’ve lived off the reservation after I got married, and I’ve only been back here for five years. (03)

I didn’t have any inclination of this program until the winter of 2000. (07)

Actually, I don’t know a lot of the history of the organization itself. (11)

An advisory board member whose family had received some of the first Navajo-Churro sheep from the Navajo Sheep Project knew some background:

A little bit. Not too much. I know that Lyle McNeal was working with about four or five families getting the Churro sheep back into their flocks. . . . There were families from all over, mainly from the central Navajo Nation area. . . . Bringing back the Navajo-Churro sheep. That’s what was going on in the early nineties. (08)

One participant first read about the origins of DBI in *Local Heroes*. Both founding members provided overviews of their experiences with Lyle McNeal and the Navajo Sheep Project.

DBI Membership

All participants said that DBI opened membership to anyone, Navajo and non-Navajo. An advisory board member added, “When they first started, I think it was just for Navajo people. I think now anybody can join. It’s very open.” (06) Participants assumed such provisos for membership as interest in livestock, working with fiber, the Navajo culture, or restoring Navajo-Churro sheep and wool. A founding member explained the influence of gender on the initial organizational structure:

First it was an all women board, but the way I saw it was the guys didn’t really care to be board members. They kind of were just in the background helping, but they didn’t

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5 DBI is one of ten community-based organizations featured in *Local Heroes*, a book supported by the Pew Charitable Trust.
want to get on the board. First it was just like a women’s board because they’re the ones that naturally were at home. (13)

The same participant described an earlier attempt to structure membership:

We used to have memberships way in the beginning, and people were paying to be a member. It was just too much to keep track of it—mailing notices and stuff. And then we said, ‘Just let it be, and anyone can come to the meeting.’ (13)

In general, participants appeared to consider anyone who came to meetings and took part in events a member of DBI.

**Board Member Qualifications**

Commitment and dedication to DBI were two qualities participants considered essential for members elected to serve on the executive and advisory boards. Commitment and dedication were defined by reliable attendance, generosity, and willingness to work toward DBI goals. Both board members and non-board members defined these qualities:

It just depends on your participation and how interested you are in the organization by showing up at these meetings. I feel that’s how I was nominated. It was just my participation... It was just through participation that somebody affiliated with DBI for a longer duration than I was nominated me. (01)

They based a lot on the person’s ability and drive to make a real commitment, and their dedication to make a contribution to the organization. It could be through their participation, giving a lot of time. Time and dedication are two main things the officers have. (11)

It was grassroots organization. It’s whoever is interested in doing the work. It was a lot of time commitment, not getting paid for that, so it was more you had to have a personal commitment, calling, meetings, traveling. It was a personal interest of people, and then at some point people would say, hey you’re good at that. (13)

When asked if I would be ________, I agreed because I believe the work that’s being done is very important. I’m willing to put in the time and help, so I can learn more and I can help others. (03)

An executive board member pointed out that DBI “wanted different clans” represented on the boards to “balance out our plans and not become a family-oriented thing” [not dominated by
one family or clan]. (04) In the opinion of another participant, a board member “would have a specialty in a certain area where the board can come and ask you specifically for advice.” (02) A founding member said that DBI elected members into positions “as it went on, people [who] kind of knew a little more about leadership skills.” (14) On the other hand, a member with expertise in traditional practices attended several meetings and simply noticed his name had been added to the advisory board. Two advisory board members had chosen to resign from executive board positions because they could not attend all the required meetings.

Previous Experience

Participants described individual experiences with sheep, wool, and weaving that had preceded their involvement with DBI. Each of the Navajo participants could claim at least one weaver in the family, and each had learned during childhood the Navajo way of herding sheep, though not the Navajo-Churro breed. Before joining DBI, six participants (40%) owned sheep, and eight (53.3%) already had some knowledge of wool processing and weaving techniques learned from family or from classes taught on the reservation. Participants also brought a variety of teaching expertise to DBI. Twelve participants (80%) described previous experiences that ranged from occasional one-on-one instruction or workshop presentations to full- or part-time teaching as an occupation. Opportunities to teach played a role in the motivation to join DBI.

Motivation to Join

Participants in general considered DBI a vehicle to strengthen cultural identity and share knowledge among sheep producers and weavers. Individual interest and concern about sheep, wool, and weaving were interwoven with a desire to teach, learn, and give back to the community. A weaver explained:
I was working with my Churro sheep, my family’s Churro sheep, and because I was a weaver I felt like I had some knowledge to exchange with other weavers and other young ranchers. I also wanted to gain knowledge. I wanted to give knowledge, and I want to gain knowledge. I thought it was an opportunity for me so I could manage my sheep better. Also, when I say exchange information with other weavers and ranch hands, I think it’s kind of like you feel you want to help your community. You want to give back. For me, it was a way to help other weavers. I could tell them how I was able to go to weaving shows and how successful they were for me. I wanted to give back to my community in that way. Joining DBI at the level of advisory board member gave me that opportunity. (08)

Interest in raising livestock, sheep in particular for their wool and cultural significance, was at the heart of six responses (40%). A weaving teacher who first acquired Navajo-Churro sheep the year before the study simply “wanted to learn more about wool, about sheep.” (05)

A participant who had learned to make felted blankets with Navajo-Churro wool at the SiLC summarized the combined attraction of livestock value and cultural tradition:

I’ve always been interested in organizations like this that can forward the people’s interest in keeping the tradition alive as well as having a lot more value in their livestock. There are a lot of creative ways, too, that come out of raising livestock. I really wanted to be part of that. (11)

Two participants described specific concerns about poor economic return from sheep:

I’m a wool producer. I raise sheep. That’s why it [DBI] became important. I needed that network because I think, as you probably heard, our wool prices are pretty low. ... So I want to be a businessperson. I want to be able to go out there and sell my own wool. (07)

The reason why I joined is I saw around me in my community where all these little sheep camps used to be, all these empty corrals—and then no one to start their herds again. ... Someone needed to reintroduce the sheep into these areas. The weaving sort of went down at one point. I think it’s on its way back up now, so the demand for wool is going to be up again pretty soon. (09)

Teaching opportunities motivated six participants (40%) to join DBI. Among these, two weavers in particular considered DBI an appropriate means to re-educate some Navajo
people about the heritage of male weavers. One had co-organized an exhibit of contemporary male weavers at the Navajo Nation Museum. Another explained this incentive:

I thought that it would fit right into DBI. As you teach weaving, spinning, then there are opportunities to talk and teach through the talking. And then some of my elders don’t know about this [male weavers]. They will say, ‘I didn’t know that. Nobody told me that.’ . . . DBI is a good place to start with those types of teachings. (09)

Another participant who attended a DBI meeting met kindred spirits interested in teaching and learning:

They were discussing those things that could be done, how to revive the sheep tradition, the lifeways of our people, how they could be re-taught to the youth and how they as members could re-learn some of these traditional lifeways. Just hearing that, I thought to myself, ‘This is a good organization that I really want to belong to, because there’s no other organization there that is focusing and using sheep as their main way of teaching.’ (01)

Another participant specified the opportunity to teach youth as a motivation to join. An advisory board member who worked as an educator joined DBI to “mak[e] sure that our culture and language is still here for future generations.” (14)

**Intention to Continue Membership**

Participants who intended to continue their volunteer work for DBI indicated different degrees of involvement. Ten participants expressed unreserved enthusiasm (80%):

“Completely. Completely. Anything and everything DBI for me.” (01) “Oh, definitely. I’m not satisfied yet. I have not fully gained everything that I need to have.” (07)

Family demands, however, qualified responses of four participants (26.7%). One person not serving on a board described her situation:

As much as I can, I would like to, but I don’t think I have the time. I’m taking care of my grand daughter. . . . Another problem I have is I go visit my mom. I have to cook for her at least one good meal for the day. She’s not really cooking any more. I have to wash for her and clean house for her. (15)
Another participant had served on a board in the past:

Every time my kids want to do something, I got to go to a [DBI] meeting. Again? You know. I’m sorry. I’ll be gone. They got to the point where they would just kind of leave me out, you know. And I sensed that, so I decided I should get away from it. (13)

Board membership also meant a balancing act:

I have her, the baby. This used to be primary, my weaving. After she came, this is secondary now. . . . Today, I was thinking how am I going to do all this? (08)

A founding member intended to continue on the advisory board because “somebody who’s been part of the history needs to stay there.” (14)

**Comparison with Executive Board**

As described in the first section about demographic characteristics in this chapter, the seven executive board members occupy leadership positions in DBI. It was possible that these individuals differed in knowledge and experience with DBI, so information gathered from the executive board was also compared with information from the population sample as a whole for this section (See Table 5.4).

Interview data from the executive board revealed similarities and differences from the sample population as a whole. To similar degrees, family or friends had first introduced the greatest percentage of executive board members (42.9%) and the sample population (53.3%) to DBI. Similar percentages from the sample population (26.7%) and the executive board (28.6%) had first learned about DBI from promotional media. This suggested that family was not necessarily a greater influence on executive board members than on other membership categories. Executive board members and the sample population described similar motivations for joining DBI, and they concurred about criteria for DBI membership and board qualifications.
Comparison of interview data revealed other differences. Perhaps most striking, five of the six participants who credited Suzanne Jamison as the person who most influenced them to join DBI were serving on the executive board at the time of the study (71.5% of the executive board). This indicated her ability to identify and encourage individuals with leadership potential. Also, a greater percentage of executive board members (71.5%) than the sample population (40%) had two to five years experience with DBI. The mean number of years of DBI experience was lower among executive board members (M = 4 years) than in

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6 N = 7. Due to rounding, percentages in each category do not always equal 100%. 

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Table 5.4 Involvement with DBI among participants on the executive board

Source: author's survey, 2003-2004

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number of Participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years with DBI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 year or less</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>2-5 years</td>
<td>5</td>
<td>71.5%</td>
</tr>
<tr>
<td>6-9 years</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>10 years or more</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Initial contact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>From family/friends</td>
<td>3</td>
<td>42.9%</td>
</tr>
<tr>
<td>Media (flyers/newspaper/radio)</td>
<td>2</td>
<td>28.6%</td>
</tr>
<tr>
<td>At SILC</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Anonymous postcard</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>Influential people</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suzanne Jamison</td>
<td>5</td>
<td>71.5%</td>
</tr>
<tr>
<td>Family</td>
<td>2</td>
<td>28.6%</td>
</tr>
<tr>
<td>Maximum travel time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 hour or less</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>1.5-3 hours</td>
<td>4</td>
<td>57.1%</td>
</tr>
<tr>
<td>4-5 hours</td>
<td>1</td>
<td>14.3%</td>
</tr>
<tr>
<td>6-7 hours</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Extensive</td>
<td>1</td>
<td>14.3%</td>
</tr>
</tbody>
</table>
the sample population (M = 5 years). The executive board consisted of experienced members, but on average not necessarily those with the longest membership.

All executive board members conveyed unreserved enthusiasm about continuing their work with DBI, compared with the sample population that included four participants who expressed a degree of reserve related to family responsibilities and time constraints. Interestingly, the estimated maximum driving time to attend a DBI meeting or event was somewhat less among executive board members (M = 2 hours) than among the sample population (M = 2.6 hours). In addition, executive board members could estimate time spent at DBI meetings and events more easily than individuals in other membership categories. Perhaps members who lived closer to meeting and event sites—and those who could estimate the time required for DBI involvement—were more likely to serve on a board.

Executive board members brought sheep, wool, and weaving experience similar to that of the sample population as a whole. As described above, each Navajo participant in the study claimed at least one weaver in the family and all had learned sheep herding during childhood. Before joining DBI, three executive board members raised sheep (42.9%), compared with seven participants (46.7%) in the sample population; three on the executive board already had some knowledge of wool processing and weaving (42.9%), compared with eight (53.3%) in the sample population. A large percentage of participants in the sample population and executive board had teaching experience. The majority (80%) of the sample population had taught in some capacity. Every executive board member had taught: three worked full- or part-time as salaried teachers and four (71.5%) had taught one-on-one.

Descriptions of the sample population in this section lent insight into family life, cultural experiences, and involvement with DBI. This information places the 15 in-depth
interview participants in a subculture that commits time and energy to an organization seeking to restore Navajo-Churro sheep and wool. Most participants were experienced as teachers and fluent in Navajo and English. All but one described sheep herding experiences from childhood, and the majority had weavers in their families. The participants seemed to hold strong expectations that they would learn through DBI involvement, whether about the sheep, marketing, culture, or weaving. The next section discusses the place that Navajo-Churro sheep occupy in the cultural identity of the participants and establishes cultural identity related to Navajo-Churro sheep as the context for the interpretation of data.

Major Themes

Involvement with DBI was not a decision made in isolation. Past experiences within Navajo culture—including experiences with agro-pastoral families, weaving, history, legends, ceremonies, language, matrilineal society—play forceful roles in shaping degrees of involvement with DBI. This section provides excerpts from experiences that place the restoration of Navajo-Churro sheep within the context of Navajo cultural identity, that define Navajo-Churro wool as a unique cultural process, and that describe educational channels used to convey information about restoring Navajo-Churro sheep as a traditional fiber resource.

Cultural Identity

Participants described the components of Navajo cultural identity that they considered linked with restoring Navajo-Churro sheep and wool. Members of DBI supported these components of cultural identity as one way to promote Navajo-Churro fleece as a traditional fiber resource. This section delineates the seven sub-themes that emerged from data as components of cultural identity.
Return of the Navajo-Churro breed. All participants considered returning Navajo-Churro sheep to Navajo lands and people as the driving force behind DBI. One participant in particular summarized this 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) According to another participant, “DBI has a unique opportunity to mold existing technologies to further the development of raising sheep on Navajo lands.” (12) An executive board member described the significance of returning the Navajo-Churro to the reservation:

For me, knowing DBI’s involvement with the Navajo Sheep Project, it was the return of the Churro sheep which was the most, in my life that I’ve seen, that I witnessed, was the return of the Churro sheep—and to have been part of that and continuing to reintroduce the Churro sheep back to some more people who don’t have that. That was, for me, the most positive thing that I’ve seen, the return of the Churro. (01)

DBI was formed with the intent to protect or bring back the Churro sheep—along with that, to help some of us sheep hands that don’t know about the importance that sheep plays in Navajo culture, to help us understand that, to support that. (08)

Participants observed the emotional reactions of some Navajo people, elders in particular, who “thought that the [Navajo-Churro] sheep would never come back, that it was gone, was extinct.” (13) A founding member recalled an elder’s reaction:

I remember when we first brought our 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)

Some participants had conferred with elders about returning the Navajo-Churro:

They’re the ones [the elders] who re-bought the idea, the ones who have learned everything there is to know about the Churro sheep. They dug back. They said,

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Although the Navajo people also raise sheep for mutton, the focus of this research was on Navajo-Churro wool as a traditional fiber resource and excludes references to meat.
"Yeah, that's the sheep you're talking about. And they're back?" "Yeah, they're at my house now." (01)

I want to experiment with having Navajo-Churro as I'm learning more about what's behind the Churro, how they were taken away from the Navajos. I think that was a big loss. Now we need to get that back. Somebody needs to, and I thought maybe it's about time that I should do some of that preserving myself. I talked with my mom and said, "Mom, I'm going to get a Churro. She thought it was a good idea." (04)

Among all participants, eleven (73.3%) owned Navajo-Churro sheep at the time of the study. Since joining DBI, four (26.7%) had obtained their first few Navajo-Churro sheep and seven (46.7%) had either re-introduced or added more Navajo-Churro to existing flocks. In addition to the Navajo-Churro that traced their lineage to the Navajo Sheep Project, three participants described small flocks of old-type Navajo sheep that weavers had kept separate from other breeds. A weaver who grew up on the reservation summarized the difficulty of knowing how many Navajo-Churro were on the reservation before the Navajo Sheep Project:

> You can't really say, because the Navajo Nation is big [italics added]. That's a generalization to say that only certain people had them. There may be people way off somewhere whose sheep are 100% Churro, and they've managed to keep it that way. Somewhere else, like ______, she has 100% Rambouillet. She prefers Rambouillet over Churro sheep. I think there are people who still had Churros before that Sheep Project came in. The Sheep Project enhanced the Churros to make sure that they stayed and cleaned up their flocks. (08)

Restoring the Navajo-Churro sheep meant more than their physical return to Navajo corrals and grazing lands. Participants also sought to increase awareness about the traditional value placed on the history, spirituality, and ecology of Navajo-Churro sheep.

Awareness. Participants described the need for awareness of the historical, sacred, and ecological value of Navajo-Churro sheep as equally important to the physical return of the breed. The name of the organization itself, Diné be'iiiná or The Navajo Lifeway, captures

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8 The next section in this chapter will discuss natural colors valued for weaving as one rationale for keeping a separate flock of Navajo-Churro.
the linkage between Navajo-Churro sheep and traditional culture. Founding members chose the name to best represent the nature of the organization because “DBI encompasses life in itself.” (14) Similarly, they named their annual celebration Sheep is Life because that is one way to translate Diné be' iiná into English.

Not all Navajo people in general, or among the participants in this study, understood that in the past the Navajos had a special kind of sheep linked with their cultural identity. DBI and the Sheep is Life Celebration had spread that awareness among Navajo people.

According to an executive board member:

I think that what I’ve seen is awareness. When people hear DBI, people automatically think Sheep is Life. If they don’t know anything else, they know that. That gets their interest, and a lot of them come forward and ask, “What is this Sheep is Life? What are you doing and why?” All the questions, that’s a beginning. (04)

DBI worked toward awareness of the connection between Navajo-Churro sheep and Navajo culture because “the ambitions and the passions and the soul of our tradition is based on the use of livestock. We have all of those necessary values instilled in our tradition.” (11) DBI had set a goal to encourage

an appreciation that we do have something worth holding onto in our culture, not because there’s a market out there now for it, but because it teaches us many skills, skills that have been part of our heritage and have been passed from generations. Things that our ancestors did we can still do today. I think DBI has made that awareness. (11)

Historical value of Navajo-Churro sheep emerged as a significant component of awareness. Navajo-Churro sheep are valued for “their history, what they stand for.” (13) DBI sought to increase awareness about the critical linkage between Navajo-Churro sheep and Navajo history in particular:
The purpose of DBI is to get the Navajo-Churro sheep back to the reservation, to influence it, and get it back to the Navajo people. That was the main breed a long time ago, way before Kit Carson, before The Long Walk. (02)

After joining DBI, another participant learned that off-reservation, commercial markets had considered Navajo-Churro sheep inferior; woolen mills rejected the coarse wool, and lambs were too lean for profitability. Awareness of history prompted a change in attitude toward Navajo-Churro sheep:

There's a lot of history involved. When I got on there [the 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)

Awareness of Navajo-Churro history had affected a change of heart about the breed for another participant:

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)

The sacred value of Navajo-Churro sheep also received attention. In addition to their historical significance, the Navajo people have considered Navajo-Churro sheep sacred animals. Navajo legend depicts Navajo-Churro fleece as “the cloud that was talked about in the creation of the sheep, when the cloud was taken down and formed into the sheep. That’s what it is to us. It’s not just yarn and fiber. It’s meaningful.” (01) A founding member explained, “It [Navajo-Churro] was spiritual sheep for the Navajo people” and added that the family’s “grandfather was a medicine man, so he always felt that [Navajo-Churro sheep] was part of the spiritual aspect of life.” (14) Another participant described the spiritual aspect of the Navajo-Churro:

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. This chant supposedly was
established way before the Spaniards brought the Churros. According to the legend, they [Navajo people] were separated from this animal and the weaving. Then they were reunited. (09)

Awareness of the ecological value of Navajo-Churro sheep received fewer mentions than their historical and sacred value. Although all participants raised the importance of awareness about either the historical or the sacred value of Navajo-Churro sheep, four participants mentioned ecological value. A founding member believed that DBI as “a sustainable farming project” had attracted the Navajo people when DBI was first organized. (14) Another founding member whose herd was composed only of Navajo-Churro considered them “better adapted to the area” and “more valuable” for their history, good wool, and higher survival rate among lambs. (13) An environmentally friendly, sustainable water system at one New Mexico sheep ranch impressed an executive board member:

She doesn’t have electricity or running water. She doesn’t haul water for her sheep because she utilizes rainwater. She has the whole system. They save all the water, everything. And that’s something we can use here [Navajo Nation]. People are always saying, “I can’t haul the water for the sheep. I can’t do this or I can’t do that.” And it’s possible. I mean, we saw it. (03)

Well-adapted Navajo-Churro sheep are more likely to subsist with that type of water setup.

Another participant, a weaver who raises Navajo-Churro sheep, admired the traditional Navajo practice of transhumance:

Even with our grazing, we had our summer sheep camp and we had our winter sheep camp. We had camps in between. Not only the vegetation, but our livestock have always been rotated on the land so we benefited that way. That all ties back to the environment. (01)

During the Sheep is Life Celebration, concern with ecology and the environment were evident. Speakers at the banquet described the importance of Navajo people reclaiming their
roles as environmentalists. Presentations at the celebration focused on environmental concerns.

Overall, participants believed that increasing awareness of the historical, sacred, and ecological value of Navajo-Churro sheep 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)

Although DBI sought to generate awareness about the historical, sacred, and ecological value of Navajo-Churro sheep, awareness had originated with agro-pastoral heritage.

Agro-pastoral heritage. The legacy of agro-pastoral families who raised sheep had influenced each Navajo participant in the study. Family heritage and childhood memories of sheep herding could spur individual decisions to raise Navajo-Churro sheep as part of cultural identity. An advisory board member attributed an interest in sheep and in joining DBI to family legacy:

Activities are geared around the sheep. To us, the sheep have been of great value, and the uses and purposes of having sheep have been taught to many generations. I’m probably the fourth or fifth generation from my family to know about raising and having sheep. I think that was the main reason why I wanted to be part of DBI. (11)

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. It would make me happy to know, if I could get that opportunity and know that’s going to come true, that the choice is there. (08)

Sheep and wool production were linked not only with family legacy but also with livelihood.

Livelihood was considered a component of the agro-pastoral heritage. Historically, the livelihood of Navajo families depended on large flocks of sheep. Two advisory board
members in particular traced their concern for Navajo-Churro sheep and Navajo culture to grandparents who had relied on sheep for their livelihood:

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 all that kind of culture. That is my interest. (14)

My grandparents at one time had 1,500 head of sheep. Out of that, maybe 30 were Churros. Then by the time my grandmother could no longer care for them... there were only 18 sheep left, and out of that 18, five Churros. So I took the Churros and then started breeding them. I would say there are 200 now, and they are all Churro. (09)

Heritage may consist not only of responsibility for family flocks, but also for grazing permits. An advisory board member who returned to the reservation after college to pursue full-time weaving and sheep production explained:

The sheep permit turned over to my sister and I.... The grazing permit is like water rights. It's a commodity. If you have that permit, you're lucky to have it. People sell it, and they cost a lot of money. That allows you to have animals to graze. That permit belonged to my grandfather, was passed down to my mom, and she now passes down to me and my sister. Because our names are on it, it's only right that we start being responsible for our livestock. (08)

The legacy of agro-pastoral families was also linked with the potential for personal and financial independence.

Independence was another component of agro-pastoral heritage among the Navajo people in general. Participants concerned about dependence on social assistance programs reflected on relationships between Navajo sheep culture and independence. An advisory board member explained that some Navajo people

get too dependent on assistance. I think in order for us to get out from under that, not solely from DBI, but just the whole idea of what can I learn? What can I do to be more self-sufficient, to... either live off the land or to live in the cities? Or have whatever we decide and choose for ourselves. And this is what DBI is doing. They
are looking at what we know, what is available. Sheep is available, so now what do we do with it? (07)

Parents and grandparents had taught participants about ways 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.” Even listening to Changing Woman when the sheep was given to us, she said the same thing: Without sheep, you’re in poverty. You don’t have anything left to live for. That’s why it’s very important for me to continue the sheep tradition and to educate people about it, especially the youth. (01)

An executive board member summarized the potential for personal independence that the Navajo sheep culture could offer:

There’s conditions when you are employed under an organization, conditions that you have—regulations, policy. But the people that are interested in their own stuff [raising sheep]—I wouldn’t say determination, but some kind of economic return—I think this is the best way to go. Get involved and do what you want to do. Work on that passion that you want, that makes you very happy. That’s what we are all about. That’s what DBI is all about. (07)

The Navajo sheep culture had provided not only opportunities for independence, but a means to educate children about life.

Traditional life learning. A generation earlier, Navajo families had sent children as young as five years old to herd flocks of sheep let out of the corral each morning. “You grow up fast with that kind of responsibility,” said one participant, a weaver. (15) When children raised and cared for family sheep, they learned about traditional Navajo culture—and other life lessons. An executive board member explained the link between sheep and life learning:

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, and how she ties that in. (01)
An advisory board member learned responsibility by caring for sheep during childhood:

As a young person, you always have to learn about sheep, because it’s considered the prize knowledge. It makes you work. You get up early in the morning, and that’s the first thing you have to think about is to take the sheep out. You have to take care of it. (10)

Another advisory board member emphasized youth mentoring:

I guess people like myself who are part of the education system, we understand that this is a powerful tool to use for future generations of kids and how we teach them—even if it is just a little focus. This is a powerful and significant thing. The culture was there way, way back, and it can still be here. How we teach our kids about relationships, and how we teach them about culture, how we teach them about language. It all goes back to having sheep culture. . . . 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? And as it goes back, it focuses back beyond the sheep. It goes back to the culture and the language. . . . The sheep is the vehicle to talking about the deeper issues, which is the culture and the language. How do you promote a healthier lifestyle with the Navajo people? (14)

Although these participants considered sheep herding a valuable way to teach traditional Navajo culture to children, another participant acknowledged that the method had broken down:

Young kids in general, they don’t know a lot about the importance of the sheep, how important they were and why it is so important to grandma. Why she is, my grandmother is—I finally understood why she does that. She goes up there in the middle of the night to see if they have lambed, or his dad does that all the time, checking on them in the middle of the night. If they’ve lambed, they go out there and take care of it. If it is cold, they bring it in, see if the mom wants it. Or feeding them, especially when it is winter like now. It is hard when the water is frozen. You have to move the snow, sweep the snow away. It is a lot of dedication that they have to go through, and it is important. The younger generation, . . . we as grandchildren don’t know a lot. (02)

Adults have applied learning gained while caring for sheep during childhood to their adult lives:

The Navajo people have many opportunities that go beyond just herding sheep. Many successful leaders today return to their stories of herding sheep to give people a unique perspective on the history of the great Navajo Nation. (12)
Raising Navajo-Churro sheep also provided one way to bridge the span between traditional and contemporary lifeways:

There’s an aspect of our tradition that can be a part of every day. It can be a part of our everyday lives. Just because it’s tradition doesn’t mean it’s something that people did, that only grandma or grandpa did when they were alive. It’s something that is alive right now. (11)

When Navajo people taught children about life relationships through the sheep culture, they also had the opportunity to influence their families.

*Family cohesion.* Returning Navajo-Churro sheep, and raising sheep in general, could affect Navajo family life, though in different ways. For a weaver who tends a Navajo-Churro flock, family support made participation in DBI possible:

I had family members who—I have to thank them over and over—because they’re there for me when I can’t be there for the sheep. Like when I’m going on this trip, for example, they’re feeding the sheep for me. When I share these things [DBI programs] with them, they think it’s important that they continue. (01)

Another participant who raised Navajo-Churro sheep traced much of the disruption in Navajo family life back to the grazing permits issued to the Navajo people during the 1930s:

I think the decline [in sheep] came from when the grazing permits were issued. Only one member of the whole camp can acquire that. In some camps one does not share, so it eliminates others and makes it [raising sheep] not appealing. . . . It created its own problems and created disharmony, especially within the family. It was one way of getting to the inner core of the family unit, with the grazing permit. Then watch them fight. (09)

A participant whose family received sheep from the Navajo Sheep Project discovered that “you kind of re-meet your own family, too, in the process” of returning the Navajo-Churro to their lives. They treated their Navajo-Churro as a family project used to promoted healing:
We wanted to bring the sheep back into our family first. It was a healing process for us. Prior to this we had a lot of family dysfunction as most, a lot of Navajo have. We have been through the sheep reductions, the alcoholism, all the things that you can think of families going through. We felt that focusing on this project in terms of bringing the sheep back to our own family has been a healing process. (14)

Similarly, an advisory board member raised in a traditional household said their sheep keep the family together. You butcher it, and you invite your whole family. There’s always a prayer among the people for their sheep. As a young person as I was growing up, my grandmother and my mother always told me and my siblings that we had to go out and herd sheep and take care of them. One day, if you get married, they will ask you to herd sheep, take out the sheep, shear the sheep, and to work with the sheep. If you don’t know how to do that, you’re not well grounded to be among the Navajo. You don’t have the cherished outlook of being a Navajo. . . . Everybody has to take care of the sheep, not thinking or saying that because you’re older and you have sheep, you don’t have one [grazing permit], the flock is not yours. My grandmother says that this is for the whole family. (10)

Gender. References to well-established relationships among gender, sheep ownership, and weaving in Navajo society also emerged during in-depth interviews. In traditional matrilineal Navajo families, women owned the sheep and their economic influence diminished when the sheep were destroyed or devalued. “Women need to be valued again the way they used to,” explained a founding member:

The influx of the non-native culture coming in kind of changed the culture to be more patrilineal. When you begin to bring back sheep, this is the matrilineal culture that is coming back. (14)

The initial decision to establish a DBI Board comprised solely of women was rooted in Navajo matrilineal culture:

For a long time there, we only wanted a women’s board. . . . We felt that was an important piece of what needed to happen. It’s only been recently that they finally have some men on the Board. We wanted to keep it a female board which was decided way back, because we thought it was important to have women as the leaders in this little group of people. I think it was a significant thing. (14)
Non-Navajo research, publications, and tourist promotion have depicted Navajo women as the primary, though not exclusive, weavers in Navajo culture. Participants indicated male weavers had been largely overlooked in the literature. A male advisory board member who sought to acknowledge the contributions of men who weave described his experience:

When I was growing up it was frowned upon for boys, male, men to be weaving. But my grandparents taught me that the men were the weavers actually, from the very beginning because it was a ceremony. It is a beauty way ceremony, because chants are done before you start a weaving. Actually there is a spindle song that you do. There is a spider song. . . . Our weaving belongs to the beauty way ceremony. That’s why only men could perform ceremonies way back, I understand. Women were not allowed to do ceremonies. So until the missionaries came, and they changed the whole idea of this is a woman’s job and this is a man’s job. Before, with the Navajo teachings, when you listen to the creation story, our jobs had no gender. . . . You know, you don’t have to be women to do this. You don’t have to be a man to do this. But when the missionaries came, all of that switched because the loom sat in the home. Their teaching was that women belonged in the house, so that’s where the men were separated from their looms. Through the years still some men wove. One of my uncles wove but this was done out of the house, away from the house in a dugout. So the men weaving kind of went underground because it was frowned upon. So that too I want to bring it back out. You know it’s not only a women’s job. (09)

When the board opened to men, DBI acknowledged men as weavers. 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) At the time of this study, DBI had elected its first male president, and three men held advisory board positions.

*Language.* A connection emerged between the return of 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 an advisory board member. A younger participant’s facility with speaking Navajo had surprised
a Navajo elder who believed Navajo fluency was fading among young people. The participant described her experience:

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. So I have an accent now! (02)

Another advisory board member, a weaver, credited DBI involvement with improved fluency in Navajo:

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)

Speaking Navajo also revealed the inherent value of oral tradition within Navajo culture: “I think it’s important to break a lot of the knowledge down and back to oral traditions. It provides a more connected teaching for the Navajo culture, based on people speaking in the first person.” (12)

Summary: DBI promoted the use of Navajo-Churro fleece as a traditional fiber resource that supports Navajo cultural identity. This section delineated seven sub-themes that participants used to define Navajo cultural identity during in-depth interviews. Research data revealed that returning Navajo-Churro sheep to Navajo lands and culture was the primary goal DBI established and carried out. An equally important goal was raising awareness about the historical, spiritual, and ecological value held in the Navajo-Churro. DBI supported the agro-pastoral legacy of Navajo families, including reliance on sheep for livelihood and independence. In addition, DBI advocated sheep culture as a way to teach children about life relationships and responsibility. Focusing on bringing Navajo-Churro sheep back into families could strengthen family cohesion. DBI also addressed gender topics. Returning
Navajo-Churro reinforced Navajo matrilineal culture; traditionally, Navajo women have owned the sheep. The initial decision to include only women on DBI Boards was based on matrilineal culture, although DBI has opened membership and board participation to men. Non-Navajo society specified women as Navajo weavers, and DBI sought to establish that men were also weavers. Returning Navajo-Churro was associated with increasing the incidence of speaking the Navajo language; speaking with elders about sheep care and wool processing encouraged participants to speak Navajo.

*Cultural Product*

The data reveal ways that DBI defined Navajo-Churro fleece and textiles created from Navajo-Churro fleece as unique Navajo cultural products. Navajo weaving has represented one facet of Navajo cultural identity for more than 150 years. Weavers assimilated non-Navajo market influences—designs and commercial yarn in particular—and yet continued to create textiles recognized as distinctive Navajo cultural products (Hedlund, 2003). DBI promoted the unique qualities that distinguished Navajo-Churro fleece, including the natural colors, fiber characteristics, and economic value as well as the social interaction supported by labor-intensive wool processing and weaving.

*Natural colors.* Navajo-Churro fleece ranges from creamy white to black, from various shades of tan to red-brown or dark brown. Carding fleece from black and white spotted sheep also produces shades of heather gray. Weavers in particular valued natural colors of Navajo-Churro fleece:

The weavers, that’s why they keep their colored sheep. My sister has grays and browns, maybe one or two each. Then there’s a man, a non-Navajo that lives near her, and he has a flock here. He raises brown sheep. (14)
I wove, but I used commercial colors. Then one day my older sister . . . and her children introduced me to this [Navajo-Churro] wool. Oh, wow! This is so beautiful, and it’s natural. There’s nothing done to it. It is natural color. And 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)

One of the advantages of Churro sheep is the colors, the beautiful rich red brown. Maybe some other breeds can achieve those colors, but we already have Churro sheep that have those colors. They’re just so beautiful, and they’re natural colors. Sometimes I make Two Gray Hills [characterized by shades of gray]. On my paternal side, my relatives are from Two Gray Hills, so it’s only good for me to weave Two Gray Hills, to keep that tradition using those colors. The colors are one of the advantages of having Churro. The colors they give—they’re beautiful. I like using other fibers like Merino mixed with something to spin. I use different fibers, but most of the fibers I use is Churro. Probably the color would be the main factor. I like the colors that it gives. (08)

Natural colors characterize certain Navajo regional weaving styles, Two Gray Hills and Ganado in particular. A weaver remembered her grandmother using colored wool from her old-type Navajo sheep:

When she spins her wool, . . . she makes a bunch of it in balls in different colors. She had all the four colors of her sheep. It’s so funny. In the winter time, she’ll weave and, if she runs out of yarn, she’ll go to the corral and shear the sheep right there on their stomach—take out that much, card it, and use it to finish her rug. (15)

An executive board member admired the natural colors she had observed in a flock:

His herd is in various colors—black, brown, white, tan. We go out to this house, and his corral is really full of color. I think that’s what my goal is, too, to have some gray, some brown, black, white, get different shades. That’s what I want to have, so I have bred my Churro ewes and hope to have some color in the springtime. (04)

Since the mid-1800s, sheep producers had interbred old-type Navajo sheep with improved breeds with the white fleece preferred by off-reservation commercial markets. Of particular interest in this study were references to small flocks of old-type Navajo sheep that weavers for generations back had refused to interbreed. An executive board member, for
example, referred to times in the past when “weavers back then did all their hand processing.
So you have some colored sheep, and they may take a portion of the wool for the weaving.”
(01) A participant who preferred weaving with natural colors mentioned that the Navajo-
Churro flock at Two Gray Hills Trading Post was never interbred. Les Wilson, the trader at
Two Gray Hills, verified that observation (Personal communication, January 25, 2004).
Another participant recalled his grandmother kept a separate flock of old-type Navajo sheep:

   My grandmother kept her own little herd of Churro. She kept them separate, kept the
   ram separate from the whole herd. And that ram was babied. It was always penned
   up. It came from her great-grandmother, and that was her connection, I guess, to her
   great-grandmother. She wove, so she used that in her weaving. The other weavers in
   the area came to her for that particular fleece. (09)

Navajo-Churro sheep at the 2003 and 2004 Sheep is Life Celebration showed a range of
natural colored fleece—brown, light tan, black, gray, multi-colors. Natural colors were
among the characteristics of Navajo-Churro that DBI could promote during the SiLC
livestock shows.

   Fiber characteristics. The fiber content of Navajo-Churro fleece has distinctive
qualities that vary among different breeding lines, individual sheep, age of sheep, regions,
and weather conditions. Some weavers prefer the wool qualities of other breeds, the
improved breeds introduced onto the reservation (Rambouillet, in particular). Weavers
accustomed to working with fleece from introduced breeds—or with commercial yarn and
wool—may prefer these fibers to Navajo-Churro wool.

Wool processing techniques and knowledge had been lost among many Navajo
artisans. Both time constraints and the introduction of commercial yarn and fiber had
diminished the need for specialized knowledge required to hand process Navajo-Churro
fleece—cleaning, washing, and carding. DBI encouraged weavers to re-learn hand
processing of Navajo-Churro fleece. A weaving teacher observed that “some of the weavers have learned to go back to carding and spinning the wool instead of going to Griswell [a pawn shop that sold commercial yarn].” (05) A teacher said DBI provided “more opportunities available for my students, like wool washing, felting, those kinds of things”. (06) An executive board member explained:

After DBI, I got to learn more about in-depth information about the sheep. The weaving I knew. It was in my family. But my involvement with DBI, I got to know the other side of it. You know, the processing, what you need to do, how to go about it, the value of it, and all that stuff I got to know. (02)

Spinning techniques and knowledge varied among participants. Different weavers expressed varied preferences for both hand processing and hand spinning with Navajo-Churro wool. Some weavers prefer to hand spin their own wool. An advisory board member explained the close connection she felt between her handspun Navajo-Churro yarn and her weaving:

By weaver, I mean working with the [Navajo-Churro] sheep, too, because . . . what I’m weaving here is all handspun, so some of my work is handspun. That’s what I am. I’m a weaver so I must have sheep. I must know about sheep. I choose to know about sheep. (08)

Interestingly, two participants had taught their mothers to hand spin with a Navajo spindle using Navajo-Churro wool. An executive board member who acquired her first Navajo-Churro sheep the year of the study said her mother think[s] the wool is really coarse and tough, and that other breeds are softer and easier to spin. If you’re shearing a yearling, a ewe, they have such soft, soft wool. It’s the same way, too. You can spin it really nice. It’s the age of the sheep. She thinks that they have coarse, tough wool. I told her those are the older ones you’re looking at. If you get some younger ones and start shearing them, then tell the difference. So I’m sort of teaching her, and she’s willing, too. (04)

Two of the hand spinners identified a specific quality unique to Navajo-Churro fleece:
A lot of people, the older folks, they remember. They say you can just spin when you shear. You can just spin when you shear it off. You don’t need to wash it and go through all that process. If they are clean, I guess, then you can do that. And they remember that. (13)

I don’t have to card it [Navajo-Churro fleece]. That white one and the black one [sheep in the corral], you don’t have to card their wool. 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. And then by not carding them you don’t agitate the fiber at all, and you don’t make them rough. (09)

DBI workshops and presentations also introduced Navajo artisans to new wool processing technology. A weaver on the advisory board observed, “A lot of our people . . . have benefited, . . . are able to see these new inventions that will help us get faster to the loom.” (08) Another weaver who hand-carded fleece had tried new wool processing equipment at the spin-offs and wanted to learn “how to buy cheaper prices of the equipment, like carders wholesale, spinning wheels or [drum] carders, things like that.” (15) Cleaning, carding, and spinning absorbed more time than weaving. Drum carders and spinning wheels shorten the time from sheep to loom.

Weaving preferences for Navajo-Churro wool also varied. Although Navajo-Churro wool has found a niche in the fiber handcraft market, off-reservation commercial markets reject Navajo-Churro wool for its coarseness. In addition, Navajo-Churro sheep yield less wool than improved breeds. These qualities appeared to have affected attitudes about using Navajo-Churro wool for weaving:

I had some grandmothers, they’d rather work with Rambouillet wool than Churro because they said it was tougher and lasts longer. They [fleece] were more coarse and tied together better. So when I brought some new breeds of Churro wool to my grandmothers, they considered it but they used it for other things, for ceremonials. . . . You can bring the Churros back, but it depends on what people recommend for their own source of weaving. (10)
The Navajo have lost touch with the Churro sheep, and working with that particular fiber kind of went out. Most of the weavers buy their yarn from the trading posts. They don't spin the wool any more. . . . My grandparents were told it was low quality wool, and they were introduced to the Ramboulets and the Merinos and the Columbians. They lost the knack of working with Churro wool, and at this day and age, very few weavers still recommend Churro wool. A lot of other weavers say it is just such a tough fiber. It is hard to work with. There are ways of working with Churro wool. That has to be relearned. (09)

Participants believed artisans who re-learned ways to work with Navajo-Churro fiber would appreciate its qualities. An advisory board member described a change of attitude toward Navajo-Churro wool:

I've grown a lot more appreciative for the Churro sheep. In school, we're taught the fine wool breeds have the biggest market because they produce very good products because of their quality and everything. But I guess quality has different meanings. To us, the Navajo-Churro wool is very valuable to us. We see it as a higher quality. We would rather have Navajo-Churro wool, a coarser wool, than a fine wool because we want our rugs to endure anything they're exposed to in the environment. . . . We use a lot of Churro wool to make the rugs because they're a lot more durable, and they can handle a lot more wear and tear over the years. We've always known that the wool was a lot hardier than a lot of different fine wool. (11)

The potential for Navajo-Churro to add value to Navajo weaving also influenced attitudes about the quality of Navajo-Churro wool.

Value-added wool and weaving. Wool production and prices paid for wool had plummeted during the decades that preceded this study. The price for shorn fleece in the U. S. as a whole, for example, had fallen from 74 cents per pound in 1992 to 36 cents in 2001 (USDC, 2004). Wool from reservation sheep at the time of this study sold for five or six cents a pound, if a buyer could be found. The wool from the majority of reservation sheep was too coarse for such commercial woolen mills as Pendleton Mills and unsuitable for textile handcraft markets on or off the reservation. Reservation wool could be sold to such alternative markets as insulation usage or futon stuffing (Ray Castillo, Navajo Nation
Department of Agriculture, personal communication, February 3, 2004). Participants in this study had seen producers burn or discard wool in ravines. A weaver who did not raise her own sheep had relatives with mixed breed sheep:

Now you can’t sell wool any more. They just accumulate each year so one or two years they just didn’t know what to do with the wool. They just kept piling it, and they decided just to burn it. They burn a lot. (15)

One rationale for restoring the Navajo-Churro was to “have them not just for your well-being but for economic purposes.” (03) At the time of the study, it appeared Navajo-Churro cost more than they returned:

Currently a lot of the interest [in sheep raising] is dwindling, because it is hard to really live financially or depend financially on just sheep raising and sheep herding. You can’t do that. It is impossible. A lot of the families that have sheep have to have a full time job on the side to . . . offset of the costs. (02)

Nevertheless, the belief emerged that Navajo-Churro wool could be worth more by developing and marketing value-added products. Two board members explained:

I see so many people who have sheep who don’t do a lot with it. They are just there. If they can have someone that has an interest in doing other things using their wool, attending one of the [DBI or spin-off] workshops and creating something with the wool, they take that back. (11)

Like selling, how to sell their wool, how to prepare their wool so it will sell for more. All the spinning, if they want to spin it to the big balls of yarn and then selling it that way. They will at that point make money off of it and make a profit out of it. (02)

Weavers estimated that rugs woven with handspun wool could be worth at least twice as much to specialized collecting markets as rugs woven with commercial yarn:

My handspun weaving sells for more. The handspun 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)

Through DBI presentations, weavers had learned more about adding value to Navajo-Churro products. A weaver presented information about marketing handspun weaving at the
2003 SILC. Board members believed DBI had encouraged better economic return with Navajo-Churro:

We've educated some of the people out there. They know what to do with their wool, how to prepare it and everything. Now with this past year's Sheep is Life, we have more involvement. People wanted to know how to prepare the wool, how to take care of the sheep itself, and then that Churro sheep wool is worth more than the other wool. (02)

Through DBI we not only help by giving knowledge, but different skills come out. People can take advantage of learning to felt—make saddle blankets, make bags, maybe make large amounts of batted felt that they could sell by the yard to somebody who wanted it. (08)

Careful record keeping could also document cultural value and increase economic value:

Before when we had our weaving class, we just had commercial yarn. We didn't do most of the dyeing and stuff like that. After DBI explained that if you do the whole process, your rug will be worth a little bit more higher price. Take down all the notes that you have done, how you got the colors, how much time it took, where you got the plants, how many days to get to do the whole process of carding and spinning and all that. (05)

A wool processing mill on the Navajo Nation could also help to "start re-introducing the Churro wool or the Churro sheep to communities." (09) A weaver described the purpose of a mill on the reservation:

I would like to see a wool processing, a successful wool processing plant where people could bring their wool, get it washed, get it cleaned, get it spun—where DBI could be behind that so we don't have to sell it to the trading posts, the stores around us, for a nickel a pound, where we could give the people a decent price for the wool. . . . We have five agencies, so it would be just fabulous if each Agency had a wool processing plant. That would maybe even encourage our people to get back into sheep ranching, to say there's a market for this. (08)

Mills on the reservation could also offset the effects of non-Navajo businesses that had begun to process and sell Navajo-Churro wool to off-reservation handcraft consumers. A weaver explained:
To be able to get a wool processing mill on the reservation, to be able to market our own Churro wool, then customers would be buying the real Navajo-Churro wool instead of just a “maybe.” There’s a company out of Nebraska that’s selling Navajo-Churro wool. It is just the name of the sheep, so when they [handcraft consumers] hear of the Navajo-Churro wool they think, “Oh, yeah. I bought some of your wool, the Navajo-Churro wool—from the Brown Sheep Company.” (09)

Non-Navajo handcraft consumers tended to overlook or misunderstand the cultural significance of Navajo-Churro wool. A weaver who raised Navajo-Churro expressed concern:

And some of the sad things always happen, too, [that] some other big company, meaning trading posts sometimes, they realize—and we’re slow at trying to get this for our people—they intervene and then they take over. I’ve seen that on the Internet lately, a couple of places saying, “Come see our collection of Churro rugs.” (01)

This participant had seen websites that plagiarized DBI website information about the history and breed characteristics of Navajo-Churro sheep.

Social interaction. In the past, the labor required for shearing sheep and processing wool brought people on the reservation together; many hands shared the work. Family stories about those social interactions led board members to initiate spin-offs held each month in different Navajo chapters:

We talked about the stories that our mothers have told us. At shearing time when it was time for some family to shear, by word of mouth people would find out, and people just came together and helped each other out, did the whole wool shearing and processing, carding. It was just a big gathering with people cooking. And now people just don’t even want to step out their door and go a few yards next door and see that person—and it’s their grandmother. That was the sad part we were talking about. We’ll use fiber and sheep and wool to try and do a communal type of gathering again and we’ll call it a spin-off. It’s been a success everywhere we went. (01)

At spin-offs, people gathered at a school, Chapter house, or trading post to card fleece, spin roving, knit yarn, weave sashes, felt with wool—any type of fiber handcraft. They brought food to share, tried one another’s craft tools, and socialized in Navajo or English. “Getting to
know other weavers and wool growers—that’s a social life,” commented one participant involved with the spin-offs. (04)

Social interaction at spin-offs, the SiLC, the Navajo Textile Project (NTP), and DBI workshops provided opportunities for Navajo artisans to learn easier ways to incorporate hand processing and dyeing into the weaving process:

Like a lady who participated in one of the workshops—she weaves, but she doesn’t want to do the carding because it’s too hard. It’s too much work. I heard some of the elders who don’t do their own dyeing because it’s too hard, too much work. They don’t have anybody to help them. For those reasons they don’t do it. I think that we’ve learned and seen if we can bring it back and show them if you do it this way, it’s so much easier. If you work as a group, it’s even 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)

Social interaction among Navajo artisans supported the designation of Navajo-Churro wool as a unique cultural product.

Family interaction was emphasized as a category of social interaction. Processing, spinning, and weaving also appeared to encourage social interaction within families. Participants recalled childhood experiences in families with weavers. An executive board member recalled that her mother

would make us clean the wool, tease it [pull it apart] so she can start carding. So we’d sit there and tease for her with our hands. Today, there are different ways. We would always sit behind the loom and help her get the last bit of weaving. We would sit in the back and help her pull the yarn through. (04)

She also learned to spin by accompanying her mother to the family’s summer sheep camp:

I used to follow my mom and be out there. She would bring her spindle. She’d sit there and be spinning her yarn. When the sun goes down, then you’d have to head back. I had that learning just being part of her. (04)
An advisory board member whose career precluded time to weave remembered wool processing as a part of family life during her childhood: “A lot of the spinning and carding was sort of saved for winter in my home, because that’s the long nights.” Whenever she returned home from boarding school,

I used to card for my mother all the time. The first two nights of carding, like during our breaks from school, we would come home and take this box of wool. The first two nights, it was, oh my! Could we do something else? So then, after all of that, the third night at this, you’d go, oh my God. This is so much fun! (07)

Participants believed contemporary Navajo families could benefit from the social interaction involved with wool processing and weaving:

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

A weaving teacher described her effort to encourage families to attend her classes:

We are trying to get a lot of mother and daughter communication with helping with 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 [to process wool and weave] as a family. (05)

Summary. The major theme in this section links Navajo-Churro wool, a unique cultural product, with the process craftsmanship required to work with the fleece. Data reveal that Navajo artisans imbue processing and weaving Navajo-Churro fleece with cultural value. In particular, artisans value natural colors and fiber qualities that are especially well-suited to Navajo spindle spinning and Navajo tapestry weaving. Weavers in particular respond enthusiastically to the range of natural colors available in Navajo-Churro fleece. The fleece of certain Navajo-Churro ewes can be spun without washing or even carding fleece.

Although some weavers prefer to use fleece from other breeds, attitudes toward Navajo-Churro fleece changes with instruction for working with the fiber. Both the on- and off-
reservation popularity of Navajo-Churro sheep and wool offer ways to add value to the wool and wool products—and create entrepreneurial business opportunities. In the past, labor-intensive wool processing encouraged social interaction among Navajo people and within families. Contemporary artisans and families benefit from the social interaction involved with wool processing, dyeing, and weaving. Among some Navajo artisans, the attitude toward using Navajo-Churro fleece has shifted from a long-standing negative attitude to a more positive, optimistic view of its cultural and economic value. Through educational channels, DBI promotes Navajo-Churro wool as a unique cultural product with the potential for economic benefits. Social interactions also generate social benefits that participants considered rewarding. The next section will describe educational channels as the process of culture change that DBI uses to promote Navajo cultural identity and Navajo-Churro wool as a unique cultural product.

**Educational Channels**

Education emerged as a process DBI uses to affect culture change. All participants considered education a valuable component of DBI activities:

There are ways of working with Churro wool that have be to re-learned, so that’s one of the benefits that I see with DBI. (09)

[DBI] keeps you up to date with everything that’s going on: weaving and learning how to weave, selling your products, with the sheep, sources of Navajo-Churro sheep. . . . knowing people from all over the reservation. You get to meet up with them and learn their interests and skills. It’s mainly learning. (07)

Participants described education as a reciprocal flow of learning across diverse backgrounds. “Not only do current members learn from others, but we also learn from them, what they bring, their knowledge and skills,” said an executive board member. (03)
A reciprocal flow of learning, however, required that individuals convene, in spite of substantial constraints. Through educational programs, DBI encouraged individuals to convene for meetings and events, build personal acquaintances, develop resource networks, educate board members, re-educate the Navajo people, encourage intergenerational communication, improve economic benefits, participate in Navajo Nation politics, and inform non-Navajo consumer markets.

Convening for meetings and events. Convening for meetings and events was considered an essential first step toward achieving goals set by DBI. "Having an organization like DBI brings people together," (11) concluded a participant who lives off the reservation. Others agreed:

So we just want to get all of these people, have them come together and then see if we can’t form as a whole nation to get out there and get all our people involved, to be more self-sufficient. (07)

I look at DBI, and not only do I see the board members' faces, I see everyone who attends the Celebration as part of DBI. We’re like a big family. We all come from different directions. We have different levels of education. Our knowledge—we all have different hats—but we all come together for the sheep, for one purpose in the sheep. I like that, that our connection is the sheep. (08)

Convening with other people for DBI activities proved intrinsically stimulating. An executive board member described the “favorite with DBI is the people, the people that are involved because they’re from different parts of the reservation.” (01) Getting together led to intellectual camaraderie. A weaver found simply “getting together and learning more about each other’s work is interesting.” (15) An advisory board member explained:

Navajos always make this comment: I wish there was several of me to do this one thing. That is the feeling that we have, that there are others sharing the same idea that you have, and you become one with your ideas. (09)
Convening for meetings and educational programs on the Navajo Nation, however, met significant constraints. These included the time and distance required for travel on the reservation, variable access to communications infrastructure, wage economy jobs, family needs, and at times indifference:

The distance that you have to travel to get there... I don't mind the drive. It's just the time. It is so time consuming just to get there. For everybody involved, even though it is centralized, we all have to travel such a great distance to get there. (09)

There's been new faces and lots of interest in this, I know. It's just a matter of getting them to be part. Time is not there for them... People want to get involved, but the time on their part—they have full time jobs. We all have full time jobs, and the only time [available to meet] is Saturdays and Sundays. We have problems with distance, too, because we're all from different areas. (04)

Since we are so scattered across the reservation, it is difficult to get to a meeting. Sometimes we only have one vehicle. Sometimes it is very hard for me to go to meetings. Plus the other commitments that I have with my family... Sometimes I have to choose. (02)

You can't just pick people up and go here and there, because some people have their ceremonial stuff and then somewhere along the line you don't have that many people to take over there [DBI event]. We kind of wait until there are enough people to take there. (05)

A participant added, "We've got families... We have responsibilities at home. We've got our sheep there." (07) Some participants felt specific pressure. A traditional practitioner (medicine man), for example, made house calls and his patients called him any time of day. An executive board member summarized the challenge of time and distance: "We live so far apart from each other that we can't see each other as much as we could living in one community." (01)

Improvements in communication technology had helped DBI organize and expedite meetings and events. More Navajo people used cell phones because service had improved on the reservation, and many had access to computers at work or, in fewer numbers, at home.
An executive board member said, “Somehow we need to make technology work for us: telephone conferencing, something like that.” (11) A long-time board member observed that access to technology had improved the “disorganized” communication during the early years:

Those were problems. Now, everybody knows what’s going on. They’re more informed. Everybody knows what’s coming, when it’s coming. And this Internet thing makes a big difference because everybody knows. That makes a big difference—communication. (06)

New acquaintances. By convening for meetings and events, DBI generated opportunities for individuals to expand their acquaintances, both Navajo and non-Navajo.

DBI “has a diversity to it that’s invaluable,” (11) explained an advisory board member. All participants appreciated the opportunity to meet new people through DBI:

The people that DBI knows have a focus and know what they’re talking about when they talk about sheep. I’ve never been in such a situation, and that is something I can look at, understand, and make more accessible, not just for me, but for everyone. DBI has the people and connections to make that happen. (12)

If I wasn’t involved with DBI, I wouldn’t know these other Navajo people who have Churro sheep. It’s because we’re a large, large community, and because I don’t have the time to go hunt out other people who have Churro sheep. (08)

The breadth of opportunity to expand the number of acquaintances appeared to have surprised a founding member:

We got to meet so many people out of this. It was just unbelievable. We met people internationally, nationally, and today we still are in contact and they are our friends. I think that’s happened with many of the board members. We’ve met people and continue to stay involved. That’s a lot of their interest. We met a lot of spiritual people, like people from the churches, from the Catholic Church . . . . We met a lot of council people that we wouldn’t have ordinarily met, part of the Navajo Nation government, the livestock people that we wouldn’t have ordinarily met. People like Lyle [NcNeal] and Suzanne [Jamison]. All these people. All the way from young to old we met. (14)
Through DBI, one Navajo woman had the opportunity to travel overseas for a cultural exchange. She had “never been off the reservation, never traveled anywhere beyond the four states, and there she goes across the sea!” (14)

Those who attended the Sheep is Life Celebration met other sheep producers and weavers, both Navajo and non-Navajo:

You meet many people with the same type of background. You meet people who have traveled far to be a part of the organization. I think this broadens your horizons in many ways, and it also brings diversity into the program. I wouldn’t limit the participants in DBI just to the Navajo people. The reason I’m part of DBI as well is because outside affiliations are a part of the program, too. There’s a lot of ideas and creativity out there. Those people that have that type of creativity will bring it to the program, and I think will only make our program a lot stronger. (11)

During the Celebration, there are different people who come who own Churro sheep, non-Navajos who own Churro sheep. For me, I benefit from them because I ask them questions about how they manage their flock. I exchange phone numbers with them sometimes. If my sheep is sick, I’ll call them and ask them about a certain medicine to use for them. Then during the celebration, I meet other Navajo weavers who know about different kinds of weaving that, if there were no Celebration, I wouldn’t be able to meet these people. . . . I’m a weaver so weaving is my life. With the Celebration, I meet a lot of other weavers—elderly and young weavers—and exchange ideas and dyes and share our experiences as a dyer or a spinner or managing sheep. (08)

Through DBI, participants connected with like-minded people, and DBI relied on those connections to develop resource networks.

Resource networks. Participants had invested time and energy in new acquaintances, people they considered resources for developing educational networks:

DBI has a huge network of people who have already found success with their sheep. They are available to provide that public education. (12)

So the part I liked was that we got different resources about where we could go if we needed help or questions. They had workshops for us that we went to—just a lot of learning. (13)

I know some weavers in the area that are now coming to us, and they’re sharing their organization with us. We’re coming to where we’re going to start networking. . . .
That’s what we’re doing right now. We’re looking for people that are using different ways with wool, even washing or spinning. Maybe there’s weavers that don’t want to prepare the wool, but they want it right here—those types of weavers that don’t want to mess around with the dirty stuff. We’re identifying those kinds of people, and I think that will help with other resources. (04)

DBI considers people with different interests and areas of expertise valuable resources for educational programs.

*Education for board members.* Board members in particular sought education from one another and from others about traditional and Western knowledge to share through DBI. During the time of field research for this study, a group of board members had traveled to visit off-reservation Anglo and Hispanic individuals with Navajo-Churro sheep. “We just took this trip over the weekend, and we learned a lot. Things like that we can bring back here and show people as a result,” (03) said an executive board member.

Integrating methods of learning and knowledge was a component of education for board members. Board members learned both traditional and Western sheep management and wool processing methods. In general, they sought to integrate and implement traditional and Western knowledge and methods in their own lives:

With the celebration, I know there’s a lot of activity at the Celebration that can help young ranchers like myself get the knowledge on how to manage sheep with Western methods as well as traditional methods. (08)

I know the westernized education about sheep, but I would like to be informed about the traditional—the parts of the sheep in Navajo, what they can and cannot eat, what to give them if they are sick, or why they are acting a certain way. Things like that. That’s what I want to do, so I will have the balance of both the westernized education that I received and also the traditional aspect—not just necessarily to choose, but I can integrate the whole thing. (02)

There’s still a strong culture we can revitalize. Maybe not in the same way it was before, but it can still be there. We can still do these kinds of things. You can still live this way. Maybe there’s modern technology that can help bridge the gap, so it’s not so difficult to manage sheep. (14)
When I learn something new that is not traditionally part of my culture, I try to make them work together, balance together... The traditional people like my mother or sometimes my grandmother see me do that, and then I explain to them what I'm doing, how I integrate the two to make it work for me. And they realize that it works. (01)

A participant with in-depth knowledge of the Navajo sheep tradition offered another viewpoint. He observed, “DBI deals mainly with management, western-type techniques. A lot of non-natives give to the Navajo people the techniques for taking care of sheep.” (10) As an advisory board member, he wanted to ensure that DBI would continue to incorporate traditional knowledge and methods into educational programs.

Educational outreach to Navajo people. Board members felt a responsibility to share their learning with the larger population of Navajo people. Participants described the importance of educational outreach:

People on the reservation know about the importance of sheep, how it is culturally relevant to us as Navajo people... the wool, weaving, processing, that whole area—how it was important to our elders long ago and why it drifted away. We have to inform people about that again here in the future—just getting the information out there and educating a lot of people. (02)

I feel that’s our main audience, the Navajo people, because we’re all trying to learn a different way to manage sheep. We’re no longer living where there’s a lot of forage. There’s roads built now, everywhere, so our lives are different from the early 1900s. Because of that, our sheep are different also. We can’t own 800 head of sheep and have them be as healthy as they were in the late 1800s or early 1900s because of the changes. In that way, the Navajo people are our main target—to help them, support them in becoming better ranchers with sheep. (08)

Re-educating people has been the most influential on my part because it’s interesting to talk with a group of Navajos. You talk about the Navajo-Churro sheep. Later, they’ll say, “Wow, I didn’t know we had sheep, what you just presented. I always thought it was the sheep that grandma still had. I always thought it was just that.” And I’ll say, “No, this was the first sheep that we had. Even in the creation story, it talks about these sheep. Even in our sheep songs, that’s the sheep that they’re talking about.” That part, they’re in awe about it, even when you show them the actual breed. (01)
Similar to education for board members, participants described ways DBI needed to incorporate both traditional knowledge and methods into educational outreach for the Navajo people.

*Intergenerational communication.* Youth and elders were designated as both resources and as recipients for educational outreach. Participants described efforts to involve youth in DBI activities. “They [DBI] really try to target the younger ones,” (11) explained an advisory board member. DBI had “added a youth group with youth representatives. They’re not as active yet, but we’ve included the youth representatives to the group.” (01) A participant with a young child had watched the children who attended the SiLC:

> A lot of young kids come out, and they get involved . . . like [with] the drum carding. It is really interesting. They stand there, and spin it and spin it. I tell them, “You can do this. A long time ago they used to do this by hand.” (02)

Participants referred to an educational focus on elders\(^9\) as much as on youth. At times, elders served as resources for traditional knowledge about sheep care and weaving:

> With weaving, my grandma learned from her mom, and my grandma taught my mom. Now my mom is teaching me about weaving. My mom told me that, because weaving has been a part of our family for so many years, she was determined for me not to learn from a class. She wanted me to learn it from her, because she learned it from her mom and down and so on. (11)

> And here are the elderlies who taught me, because they’re still alive. That’s who I go to each time I want something answered. I sit and I talk with them. They may not be direct questions, but slowly I maneuver. In that way I get a lot of information about all kinds of things. . . . You end up leaving their place with a lot of knowledge. (01)

On the other hand, there were elders who wanted to further their existing traditional knowledge or learn new information about sheep, wool, and weaving:

\(^9\) Many participants used the term elderlies interchangeably with elders.
I talk about sheep to my family members. My mom is interested; my grandmother likes to hear more about it. She comes to me asking what do I need to do [about sheep management]. (02)

I always thought when I was herding sheep, I want to learn about these things and teach my brothers and sisters. To this day, I taught one of my grandmothers how to do sash belts, one of my other brothers how to do felting. (10)

Negotiating a middle ground between generations could also provide difficult:

For me, although I manage the sheep, the sheep ultimately belong to my mom. I have to respect her wishes. It's hard weaving traditional and Western methods together. She comes from a traditional background, and I'm stuck in the middle of both cultures. I want to respect the Navajo ways, but my knowledge as a student of the environment somewhat interferes. I know there's other people going through that out on the rez somewhere. Trying to respect both sides is really hard. (08)

Economic return. Education was also seen as critical for improving the economic return from Navajo-Churro sheep, wool, and handspun weaving. One participant summarized the purpose of DBI as “an economic development program for families who want to make money from their flocks, with an emphasis on bringing back the Churro sheep.” (12) A teacher described ways that DBI-sponsored demonstrations and workshops had encouraged students to consider the economic benefits of working with sheep and wool:

I want my students when they graduate to have some skills that they can do on their own in their free time when they have nothing else to do. Not employed, they can do these things. They can shear sheep when needed and get paid for it. They can wash wool if they want to—we’ve been learning to do that—and sell it and get more money on it. . . . We call them hobbies but if it’s something you need and you can make money on it, then it’s a business, an enterprise. (06)

Education was also seen as a way to inform Navajo wool producers about offering competitive products for Navajo weavers and the off-reservation handcraft market:

Navajos ruined the price of the wool. We don’t fix it, grade it, do the extra step to make wool what it should be worth. The Navajo people who want to make money from their wool need to do that. That the prices went down, it was our own doing. Wool can be worth money, but you need to bring the value to it. I think DBI’s work with that is very important. (12)
I think people see the value in this [Navajo-Churro wool]. We show them that we still can do this. We still can preserve our value back into the wool. When we see a newcomer, they really get motivated by it. They’ll say, “Wow. This is a good idea.”

(04)

Weavers in particular anticipated higher payment for rugs woven with handspun Navajo-Churro wool. A weaver who wove with hand processed, hand spun wool was adamant that “when you put in all this much work, you don’t hesitate to say this is how much I want for it.” (05) Both weavers and sheep producers benefited from DBI-sponsored educational presentations about marketing Navajo-Churro sheep and handspun Navajo rugs:

I know I’ve benefited a lot in the marketing aspects of this. I not only have gone to seminars and workshops at the Sheep is Life Celebration, I have met people who have knowledge of marketing skills. I’ve benefited that way myself. I promote my work [weaving] and my family’s work and the sheep. Locally here, people come to me now. I put up flyers or little ads. (01)

I know there is an economic benefit to it—people learning how to market their sheep better. How do you save on your products, like hay and stuff? How do you do that so you save money? Those kinds of things. I think there’s some benefit that way. (14)

That’s a valuable thing to do—getting to know other weavers and exchange ideas and help each other in the way of bringing up the price of the rugs. I think that’s the main thing that we would get more money for the work we do. It’s hard work. (15)

An executive board member and weaver provided an example of a specific strategy learned from a DBI marketing presentation:

You can ask a better price when you have everything [written] down. If a buyer asks you, “How did you get this?” instead of trying to figure out—like if somebody else did all the work and you just bought everything from them—then you wouldn’t know how it was carded and how much time it took. But if you do it yourself, then you know the whole thing. (05)

When weavers learned new marketing strategies, they also gained self-confidence about improving their economic return from weaving.
Political activity. In some cases, education about Navajo-Churro sheep and wool had prepared DBI members to speak for the Navajo sheep tradition in political settings. Lack of Navajo Nation support for sheep as livestock troubled a participant who said, “The support is just not there, not only from our people but from our government. For some reason, it’s just completely overlooked.” (01) After attending grazing committee meetings that presented information only about horses and cattle, he spoke as an advocate for sheep producers. A subsequent meeting included a workshop about managing sheep. A founding member explained her similar experience years earlier:

They’re [DBI] a voice that wasn’t there before. Now there’s a voice. When the [Navajo Nation] Council people went to the meeting, they would hear all about cattle from the cattle people and also from the people who raise horses. But there was no voice for people who had sheep out there. Now I think there’s a voice that says, “Hey, we count, too”—a kind of political voice that wasn’t there before. (14)

The effectiveness of an organization like DBI was interwoven with Navajo Nation politics:

DBI isn’t so radical or environmental. It’s using Navajo and English to connect a whole global community about a significant part of Navajo people that goes beyond. It’s a healing process, it’s an educational process, and, God forbid, it’s a political process. It’s a huge wheel that’s beginning to turn. I think we’ll find a lot of people who are committed to it. There’s a lot to do. (12)

For anything to happen on the reservation, you have to have a political voice. One of the things you have to be is that political voice; it needs to be there to say this is important (14)

Educational outreach to non-Navajo market. There was a strong market for hand spinning, weaving, and knitting with specialty fibers across the country during the time of field research. In addition, non-Navajo collectors continued to purchase Navajo rugs from trading posts, auctions, and other sources. The Internet in particular had emerged with new marketing opportunities for fiber handcrafts. A weaver commented that in this market, “I
think that in Anglo society, you are always romanticizing, living in a romantic world. It is a good thing that they do, so we could sell Churro wool.” (09)

DBI intended to “educat[e] the public about a different aspect of the Navajo tradition, which is raising sheep and herding.” (11) Educating Navajo rug collectors about the cultural significance of Navajo-Churro wool was another DBI goal:

DBI is not only there to teach the Navajos to re-learn how to do this and how to raise Churro, but then to educate the buyers about the quality of the weaving. That’s our goal also. (09)

An advisory board member who lived off the reservation considered the SiLC an especially effective conduit for educating non-Navajo people about the Navajo Nation:

I try to encourage a lot of people at school and my friends to attend [the SiLC]. They can actually see where I’m from, and they get to see the land and the people. That opens a lot of people to the Navajo Nation and to the people. . . . They have that interest to come onto the reservation and meet the Navajo people and see what they have to share from their own experience and share it with others. It’s kind of an exchange of cultures there. (11)

Summary. Through educational programs, DBI linked their traditional fiber resource with cultural identity and promoted unique cultural products. The process of education began when DBI members convened for meetings and events. There were substantial constraints that opposed educational channels: travel time and distance, communication infrastructure, wage economy jobs, family needs, and at times apathy. The rewards of meeting new people and developing resource networks helped outweigh the constraints. DBI generated educational outreach programs for Navajo people that would integrate traditional and Western knowledge of sheep management and working with fiber. Intergenerational communication emerged during the educational process.
Presentations and workshops about marketing and sheep management provided information that could improve economic return from sheep, wool, and weaving. In addition, some DBI members gained confidence to advocate for sheep producers in Navajo Nation political arenas. Educational outreach to non-Navajo collectors and fiber artisans informed off-reservation consumers about the cultural significance of Navajo-Churro wool. Increased awareness of Navajo rugs woven with handspun Navajo-Churro suggested that weavers could reconfigure values and negotiate authenticity. Education had far-reaching implications:

Many successful leaders today return to their stories of herding sheep to give people a unique perspective on the history of the great Navajo Nation. With the state of our world today, I think such teaching from an indigenous culture from America is needed for posterity. The idea of presenting the Sheep is Life philosophy in the light of human rights will bring many cultures together. (12)

Organizational Sustainability

A fourth theme that emerged from the data revealed factors that sustained DBI as an organization and that supported and institutionalized the previous three themes. These factors included committed leadership, community outreach, ethical standards, and fund raising. In addition, membership helped build board member capacity, expressed as increased self-assurance, participation, and new capabilities.

Committed leadership. Sustaining the organization required commitment and leadership, in particular from board members. “When you’re involved with a non-profit organization, you want it to be successful. It takes a lot of your time and energy, an enormous amount of work,” (07) explained an executive board member. An advisory board member clarified the need for leadership among board members:

I think their responsibility has to do with being leaders and exhibiting those leadership skills. Being able to do that I think will help people to follow their views. If they can keep active and participate in these events, the people will see them. They
will be end results—the positive end results—and they will want to be part of that as well. I think those are important ways to keep the organization going. (11)

Participants suggested specific ways to enhance leadership skills. An advisory board member, for example, suggested that board members commit to three or four years of service, instead of one year, to foster consistent long-term goals. Then it would make sense to “have them take workshops so they could re-teach the people.” (08)

Board members assumed substantial responsibility for attending meetings and participating in educational programs. Although DBI members were appointed or voted into specific board and committee positions, they considered their responsibilities somewhat flexible:

Pretty much they [DBI executive board] appoint people to do whatever activity needs to be done. It’s their responsibility, but if they need help, then they have other people to help them. The head people, the president and fellow advisory people help them. It’s really good. They always have a backup. Then if a person can’t do it, they can have someone else finish. (10)

Interview data revealed leadership sub-themes concerned with community contributions and membership recruitment.

Community contribution played a significant role for DBI leaders. An appreciation of the opportunity the organization provided to contribute to community emerged as an important factor of committed leadership. Twelve of fifteen participants (80%) described the satisfaction derived from giving back to community as a primary motivation for serving on a DBI board:

I think you have that thing in you: “Wow, I’m giving back something to the community.” (04)

When I joined DBI, it was more not only to benefit me, but to benefit the people. (07)
... you feel like you want to help your community, you want to give back. (08)

More specifically, two participants attributed the desire to give back to community to their traditional Navajo upbringing:

Giving back to our communities is our main, main objective, always doing that. That was the Navajo way at one time. I don’t really see it any more. We’re so used to taking, taking, taking now. I guess because that’s what we see in the other world. With DBI, we’re able to show that, to teach that. (01)

I feel like I have done something for the community. As far as receiving back, I guess I don’t look at that too much. It is up to the Great Spirit to receive. So that’s just the teaching that I was brought up with. (09)

The desire to give back to community appeared to be an inherent quality of DBI members in positions of committed leadership.

Membership recruitment also emerged as a concern among DBI leaders. Recruiting new members committed to DBI goals and Navajo communities was another component of committed leadership. For one thing, members became tired. A former board member said, “It was a 24-7, and I got tired. I was exhausted.” (13) For another thing, new people contributed fresh ideas. During its early years DBI had fewer people, explained an advisory board member, so new people were recruited with “new ideas, . . . fresh ideas” (10) that broadened the scope of the organization. To attract new members and new leadership, DBI had become “more open, inviting and involved more people in their activities.” (06)

Individuals who held leadership positions in DBI not only needed to attract new members, they needed to recruit those qualified to step into leadership positions. They tended to watch for interested individuals with valuable skills and knowledge that could contribute to DBI:
One of the other things about DBI is, they really want you to get involved. If you have something to contribute, they will utilize that. They will take advantage of that. Yeah, I was honored when they asked me to maybe be a presenter. (11)

When DBI board members planned educational programs, they considered ways to attract new people, whether Navajo or non-Na

I think it's important to use different kinds of media to attract more people who want to work in many different ways. There are members from outside, depending on their level of commitment. That way, you're forced to work with everyone and come out with ideas. (12)

I've been working with DBI or thinking about goals, how to make the celebration better, what kind of speakers can come that would influence the new people who will come to Sheep is Life, the new Navajo participants who come to Sheep is Life. (08)

Community outreach. In addition to attracting new members, DBI developed outreach programs for the Navajo Nation in general. At its inception, the Navajo Sheep Project had been the umbrella organization for DBI. Now, DBI sought to become an umbrella organization for outreach projects that would benefit the Navajo people in general.

Community outreach was a major goal specified by the Administration for Native Americans (ANA) grant:

DBI under the Administration for Native Americans grant, the focus is to do community outreach to the chapter communities, working with families, organizations, shepherds, weavers, anybody who has interest in bringing back the Churro sheep and using the wool with a value added approach, not just to the sheep but the entire industry that allows families to work from their homes. (12)

Community outreach could also serve as a springboard for other endeavors:

I really want DBI to continue as an organization that it is, and to become a huge umbrella. . . . After we do all our ANA grant and we've educated the public about our missions and our goals, maybe DBI and Sheep is Life could become two different organizations, one non-profit and the other for profit. . . . Maybe Sheep is Life can become the co-op or maybe even have, who knows, a building where we can have businesses on the Internet for profit. (01)
Funds from the ANA grant paid a project director who focused on community outreach and an administrative assistant in a Window Rock office that served as a clearing house for DBI information:

Now you can just say, “There’s this contact number and an office. You can go there and ask our project director more. He’ll have more information, and things like that.” You’ve not over here trying to figure it out. (05)

Ideally, even the most isolated Navajo people could benefit from community outreach:

A lot of Navajo people hardly see their grandmothers, and a lot of grandmothers stay home. Some of them, they can’t travel far across the reservation to workshops. I think that not a lot of people can come out and participate in the DBI meetings. It should be in small group areas where they can go out into small chapter meetings. (10)

Community outreach was not only a primary goal for DBI at the time of field research, it was a factor that contributed to sustaining the organization.

*Ethical standards.* Conflicts arise within organizations. The way that an organization resolves conflict and makes decisions reflects ethical standards set by its membership. Three participants (20%) referred to conflicts that had led some Navajo people to believe DBI existed for the benefit of only certain families or regions on the Navajo Nation:

There was a little bit of negative participation of a couple of people, but these people are no longer affiliated. They wanted to make it just a family-oriented type of organization. But I think it was good that Suzanne was there, because she said that’s not our mission . . . . We want to keep it open for whoever is interested in it. It doesn’t matter what walk of life or who they are. We need their input and their participation. (01)

We traveled extensively just to make sure that we’re out there, to tell people, let them know that this [DBI] is just not for the _____ area. This is not just for _____ or _____ or these communities that are here. My understanding is that, prior to our becoming involved with DBI, it was sort of geared to one group or family because they are the ones that did all these projects. But when we [current board members] came on board, it was for everybody. (07)
I think when they first started, the people were members just to see what I could get. That's just my personal feeling. I may be wrong. A lot of organizations are that way: “I'm going to join to see what I can get.” That's how I started, too. (06)

Another participant objected to people who contributed minimal, self-serving effort as board members, “people that just sit on the board to be on the board.” (13)

A high standard of ethics will contribute toward a sustainable organization. Conflict resolution skills and democratic decision-making emerged as sub-themes that supported the standard of ethics.

Conflict resolution played a role in maintaining ethical standards. DBI had to resolve conflicts. At times, no one wanted to tell self-concerned or unproductive people to leave board positions, and in the end some people simply chose to leave. “It actually just works itself out, because eventually people know who shouldn’t be on the board,” (13) explained one participant. Another time, an advisory board member observed the executive board as they worked together to resolve their differences with a particular individual:

I've seen conflicts. It's really disappointing. . . . When we don't focus on what the mission is and the purpose of the program, I guess that's when you get the negativity. I liked the way the different people in the program were able to talk about it and resolve the issue. Everyone had a chance to voice their opinions. After the opinions were voiced, they made efforts to select another person for the position. I think it was handled professionally. I think they turned a negative thing into something positive by coming together and resolving an issue together. (11)

Another example of conflict resolution took place three months after the interview phase of field research. The executive board confronted their project director about his work performance. DBI officers met with him in the presence of their attorney, and they compared his work to date with that prescribed by the (Association of Native Americans) ANA grant. The project director resigned, the board hired a DBI board member in his place, and officers
realigned to cover board responsibilities (Personal communication, participant 04, June 29, 2004).

Participants in general spoke highly of current board members and goals that benefited the Navajo people. "These people that sit on the board are unselfish," said one executive board member. (07) An advisory board member described the kind of selfless attitude required to discourage conflict:

As a volunteer person, we have to forget ourselves and not grab everything that is sent our way. As I said, "If you do that, you know, you are just dumb as a rock." You are hindering this organization from getting the community's benefits. (09)

Democratic decisions were also an essential component for maintaining ethical standards. The second sub-theme that emerged focused on democratic methods used to make decisions and set common goals. Members of DBI in decision-making positions talked with sheep producers and weavers in their communities to assess their concerns:

Those are gathered and taken to the board meetings. Whoever wants to be part of this group gets to discuss these concerns, and we talk about what we may be able to do, how we can help. That's how they usually get up to the table, on the agenda. (01)

Usually, we had to ask the local community how they wanted it done or what they want, what they are after. How we can help them really achieve what they are after. If not, we could, just find someone we could send them to. (13)

During the meetings, everybody has ideas and has their own little projects they're working on. We try to look at what we want to do and what people are doing that would fit into the goals of DBI. (03)

Board meetings were open to suggestions from board members—or from anyone with shared interests in working to restore Navajo-Churro sheep and wool and to contribute toward education programs that supported those goals.

The executive board, composed of voting members who determined goals and allocated resources, included a parliamentarian. The board made decisions "democratically,
as a group” and “use[d] parliamentary procedure rules.” (06) Executive board members explained:

We go by Roberts Rules of Order. When we motion something, we discuss it, and then we vote. Our secretary takes minutes. If something needs to be more clarified, we will have that before we vote on something. It's where everybody agrees with something—we have to, if we want it to work. We have to agree on something. By votes, we usually get things passed. (04)

Things that require group decisions, we discuss and everybody has their input. Usually, that's how we reach a decision: have everybody discuss and talk about it, put in ideas. Then we try to work it all out so it's something that we can all do and support. (03)

An advisory board member observed this process at an executive board meeting:

The officers will list some ideas on what to do. They'll go down the list and kind of talk things out: whether they have the funds to do a certain activity, the manpower they can get, the participation they think that might happen. A lot of them are realists. They will tell you whether or not something will work or won't work. I'm glad that people feel comfortable about maybe disagreeing on an idea. . . . People aren't afraid to say they disagree about something. A lot of it is collaborative effort to generate different ideas. A lot of the committee members and advisory members do a lot of this decision making. At the time I was just attending meetings. I wasn't even on the board, and they would ask me about my opinion. I think that is an important thing, too. They don't just limit suggestions to within their own group. (11)

Fund raising. Board members relied on democratic methods to select projects and raise funds. Although Suzanne Jamison contributed her expertise to find funding sources and write grants, she worked closely with board members. Executive board members described the process:

When the grant was being written, everyone had input. What are some of the things that we want to see? What's of value in a project? What does it mean to you? What does it mean to groups that are from these various chapters that are selected? (07)

I get a lot of support [from a Navajo chapter] and I take it back to DBI and tell them the outcome. If there's enough interest, then Suzanne says, “Okay, it's worth it.” That's when she writes the grant. It's back and forth. She gives us the draft. We review it and bring it back. We do a discussion about it. We chase things around, and it becomes a final grant, gets submitted, and a lot of times it gets accepted. (01)
Another executive board member also linked fund raising with recruiting new members:

Get more people involved so you have more help. People fade away, but some have to stay. They [DBI] are going to have to offer more, more benefits for the members. If they keep writing grants, they can reach it. You have to have something that they want. (06)

Participants suggested ways DBI could raise additional funds. An advisory board member suggested a budget that “runs on its own” through “hefty revenue from workshops and donations” would help the SiLC in particular. (08) The income could also pay for scholarships to attend educational programs during the year. A weaver suggested that DBI could establish a store for selling rugs and fiber because “the trading posts are just getting rich on rugs that people bring in, and the weavers are not getting anywhere with it.” (15)

Another participant suggested DBI use models of off-reservation enterprises based on Navajo-Churro sheep and wool and “can start its own school.” (12)

Building board member capabilities. Participants in this study brought relatively high levels of education and experience with them when they joined DBI. Membership in DBI and on DBI boards also offered ways to learn new capabilities used to manage the organization and apply new learning to their lives.

Organizational participation offered new experiences for many DBI leaders. Membership in DBI provided an opportunity to gain experience working within an organization, specifically learning to serve on a non-profit board. This was a new experience for a weaver on the advisory board who had never belonged to an organization. So that is one thing I am learning is to be part of an organization—an organization that fits with my lifestyle as far as sheep is concerned—and to learn ways to work with the community. (09)
An executive board member explained, "The benefits for everybody involved is you’re working with a non-profit organization. You get to know how a non-profit organization works." (02) Experience with DBI helped improve her resumé:

> Basically, I put in a lot of things I learned from DBI, specific information like meetings and how to run the meetings, things like that. It is kind of like a business that you have to run. Getting to know and working with people, letting people know who you are and what you stand for. (02)

Self-assurance emerged as another category of capabilities. Six participants specified ways they had grown more self-assured during their involvement with DBI. An advisory board member said, “You feel like you have a purpose” when working with DBI. (09)

Executive board members expressed personal emotions:

> For me, I feel like I’m doing something that’s giving me a positive feeling about myself, that I know I’m doing something. I just feel great about it. I’d like to continue being part of the organization. What I’d like to gain is to feel that I’ve done something to help people, to say, “Yeah, I was part of it.” (04)

> I’ve always been kind of a shy person, so part of the process for me was to be more vocal and to stand in front of a group of people and not be shy but say what you need to say. That reinforces, especially to native people going to a chapter house. (14)

More specifically, executive board members conveyed ways that teaching and writing had improved their self-assurance:

> My favorite part [about DBI] is attending the whole week of Sheep is Life. You feel like you’re part of the higher people because you’re one of the instructors there. You feel more like a college teacher instead of just somebody lower. It makes you feel good that people are learning from you and that you can pass on some of what I’ve learned to somebody else. That’s what makes you really feel good. (05)

> When I got involved with DBI, speaking to Suzanne again and she’s gotten me to write proposals. I’ve written a successful grant from the Commission on the Arts. The proposal writing and everything—I’ve gone to training, a workshop through DBI. I wanted to learn how to write proposals. I wanted to learn how to communicate effectively on paper. (02)
A founding member believed participation in DBI “kind of opens you up. You think, ‘What else could I do? What else is out there for me to tackle?’” She elaborated on how her experience with DBI had influenced her work at an off-reservation public school:

Once you’ve experienced being a board member or getting something to fruition like DBI, it opens you up to say, “Okay, where’s the next place I need to focus my energy? What do I do to better the Native community?” For me, that’s what it’s done for me. It really builds your self-esteem to a point where now I know I am going to eliminate the stress and learn a little bit more about how to deal with all this and get to know the community of the native people in the leadership. That is some of the learning that I’ve seen from working with DBI. I can go here, and I can go there and can find the people I need to find to make this connection and to start talking about some of these things that are happening in the community. . . . A lot of it comes out of working with DBI. And a lot of the people who have been on the board have a similar kind of perspective. (14)

Capabilities in themselves helped describe the experience of serving on DBI executive and advisory boards. A previous section described the levels of education and experience that participants brought to DBI membership. Among the participants who contributed in-depth interviews, thirteen had served on a DBI board in the past or at the time of field research. Interview data revealed ways that each person’s experience on a DBI board had or had not contributed to individual capability. Capabilities were organized into three categories: (1) business capability (business, computer, marketing skills), (2) communication capability (writing, speaking, teaching, demonstrating, working with youth and elders), and (3) craftsmanship capability (sheep herding, processing wool, weaving skills). Participants indicated whether they had used these skills while serving as board members. They also conveyed whether they had known each skill before joining DBI, had learned the skill from DBI, had known the skill before but learned more after joining, or had never learned the skill (See Table 5.5 and Appendix J).
Table 5.5 Board members capabilities\textsuperscript{10}  
Source: author’s survey, 2003-2004

<table>
<thead>
<tr>
<th>Capability</th>
<th>Used with DBI</th>
<th>Knew before</th>
<th>Learned with DBI</th>
<th>Knew, learned more</th>
<th>Never learned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (#)</td>
<td>% (#)</td>
<td>% (#)</td>
<td>% (#)</td>
<td>% (#)</td>
</tr>
<tr>
<td><strong>Business Capability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td>77 (10)</td>
<td>15 (2)</td>
<td>23 (3)</td>
<td>46 (6)</td>
<td>15 (2)</td>
</tr>
<tr>
<td>Computer</td>
<td>77 (10)</td>
<td>92 (12)</td>
<td>0</td>
<td>0</td>
<td>8 (1)</td>
</tr>
<tr>
<td>Marketing</td>
<td>46 (6)</td>
<td>31 (4)</td>
<td>39 (5)</td>
<td>23 (3)</td>
<td>8 (1)</td>
</tr>
<tr>
<td><strong>Communication Capability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writing</td>
<td>39 (5)</td>
<td>69 (9)</td>
<td>0</td>
<td>31 (4)</td>
<td>0</td>
</tr>
<tr>
<td>Speaking/Teaching/Presenting</td>
<td>85 (11)</td>
<td>46 (6)</td>
<td>8 (1)</td>
<td>46 (6)</td>
<td>0</td>
</tr>
<tr>
<td>Work with youth, elders</td>
<td>92 (12)</td>
<td>46 (6)</td>
<td>0</td>
<td>46 (6)</td>
<td>8 (1)</td>
</tr>
<tr>
<td><strong>Craftsmanship Capability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herding</td>
<td>23 (3)</td>
<td>46 (6)</td>
<td>8 (1)</td>
<td>46 (6)</td>
<td>0</td>
</tr>
<tr>
<td>Wool Processing</td>
<td>46 (6)</td>
<td>23 (3)</td>
<td>39 (5)</td>
<td>39 (5)</td>
<td>0</td>
</tr>
<tr>
<td>Weaving</td>
<td>31 (4)</td>
<td>39 (5)</td>
<td>31 (4)</td>
<td>15 (2)</td>
<td>15 (2)</td>
</tr>
</tbody>
</table>

\textsuperscript{10} N = 13. Includes participants who had held board positions in the past or during the time of field research. Due to rounding, not all rows for each skill add to 100%.
Results indicate three overall patterns among board member capabilities. First, board members brought considerable capabilities with them when they joined DBI. Second, the amount of learning before and after joining DBI varied among different capabilities. Third, only an occasional board member had never learned one or more of the capabilities assessed during the in-depth interviews.

Business, computer, and marketing skills represented business capability. Business skills included bookkeeping, meeting/workshop organization, note taking, administration, and working with others in business settings. Although two people brought business degrees to their work with DBI, two others had no business experience of their own or with DBI. Board members used the marketing skills they had learned—media publicity, product labeling and positioning, target markets, copyright—to promote DBI and to sell their own products. Before joining DBI, all but one board member had computer skills—ranging from e-mail to word processing to web page design. Among these, two (15%) were self-taught and 10 (77%) had learned in the classroom or at work. The participant without computer skills expressed no interest or need to learn and relied on telephone and in-person communication. On the whole, the majority of board members had either learned or learned more about skills in business (69%) and in marketing (61%) after joining DBI.

Writing, speaking/teaching/presenting, and work with youth and elders represented communication capability. All participants had writing skills when they joined DBI; the five (39%) who used writing in their work with DBI had written e-mails, business letters, memos, or meeting notes. Four contributed ideas about grants to Suzanne Jamison, who formed ideas into grant terminology. One participant, mentored by Jamison, had written a DBI grant. All board members had some experience with speaking, teaching, or presenting.
Five (39%) were comfortable teaching one-on-one in small groups; six (46%) had professional experience in schools or workshops. On the whole, board members conveyed more confidence in oral than written communication skills. More participants used oral skills (85%) than writing skills (39%) for their work with DBI, consistent with a traditional Navajo way of teaching by demonstration.

Work with youth and elders included demonstrating handcraft tools, conversations with elders, or teaching different age groups about sheep care, wool, and weaving at workshops or school presentations. Among the six participants (46%) who had learned more about working with youth and elders since joining DBI, one had worked more with youth, especially during the SiLC; two had communicated more with their elders; and three had taught classes or workshops that included all ages, with an emphasis on including the range of ages within families. The only participant who had not worked with youth or elders contributed to the business side of the organization. The high percentage of experience working with elders or youth may be attributed in part to those with teaching occupations, but also to learning interactions that occurred within extended Navajo families who often reside near one another.

Skills that involved caring for flocks, wool processing, and weaving represented craftsmanship capability. All board members but one had learned the Navajo way of herding sheep during childhood. The only exception was a participant whose family had not raised sheep. New learning about caring for flocks (46% of participants) emphasized the Western methods of herd health—immunization and grazing methods for small flocks, for

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11 The terms flock and herd were used interchangeably. Although the interview document asked about herding, participants described a range of care that included flock management and herd health in particular.
example. The combination of traditional learning and new learning supported the integration of traditional and Western information that has emerged as a major emphasis for educational channels.

All the Navajo board members recalled weavers in their families, often several generations back. The five participants who used weaving skills for DBI had taught or demonstrated at SiLC, spin-offs, or schools. Among these were the four weavers who had not learned more about weaving from DBI; they could be considered master weavers. Two participants did not learn to weave: one was interested only in livestock and wool production, and the other’s occupational demands precluded time to weave. Eight participants (62%) had learned some level of weaving skill from a family member before joining DBI, and of these four had learned more about design and four-harness weaving. More than half the board members (62%) had either learned to weave or learned more about weaving since joining DBI. Membership on a DBI board appeared to stimulate interest in weaving, though family weavers may have laid the groundwork.

Processing wool involved cleaning (picking), washing, carding, spinning, and dyeing. Those who used these skills for DBI had taught or demonstrated. The participants who knew this skill before joining had all learned from family. Interestingly, 10 board members (77%) had either learned or learned more about processing wool after they joined DBI. New learning included natural dye methods but emphasized Western tools used to speed hand processing: drum carders and spinning wheels in particular. Herd management reflected an integration of traditional and Western methods. Among board members who had returned to hand processing, a more traditional practice than using mill spun yarn, many had incorporated Western tools to shorten the time between fleece and loom. More board
members had learned or learned more about processing wool than about any of the other
skills. The emphasis on new learning about wool processing indicates perhaps the area of
greatest loss and the revived interest for using a traditional fiber resource.

Summary. A sustainable organization will position itself to continue to carry out its
purpose for subsequent generations. Sustainability requires that an organization consider
social, ecological, and financial soundness. Factors suggested for sustaining DBI included
committed leadership, community outreach, sound ethical standards, dependable funding
sources, and building capacity of board members. Those who served on boards sought to give
back to the community by working toward DBI goals. They also recruited new members who
brought fresh ideas and energy into the organization. Educational outreach programs
available to all Navajo people would ensure that DBI did not benefit only select individuals,
families, or chapters. Committed leadership, outreach programs, and sound ethical standards
addressed social factors. That is, these were the ways benefits were made available to anyone
interested in returning a traditional fiber resource to the Navajo people.

Grants provided the primary economic support, although workshops and the SiLC
were potential income sources. Receiving grants depended on topics and content selected by
DBI members and on Suzanne Jamison's expertise at finding and writing grants. Board
members brought considerable skills and experience to DBI and had learned more after they
joined. Participants expressed the lowest confidence in their writing skills. They described
their greatest strengths lay in knowledge of sheep management, weaving, working with youth
and elders, computer skills, and experience with speaking, teaching, or presenting.
Proposed Model for Sustaining Navajo-Churro Sheep and Wool

This chapter has provided insight into why participants in this study chose to use a traditional fiber resource, to participate as board members in a community-based organization, and to receive and share benefits from educational channels that support their choices. Participants describe the importance of having the choice to use Navajo-Churro wool, volunteer for DBI, and use education that integrates traditional and Western knowledge and skills. An inductive model for sustaining Navajo-Churro sheep and wool emerges from this data. This final section describes relationships suggested by this model (See Figure 5.2).

Individual participation as DBI board members represents a conscious effort to promote the use of Navajo-Churro wool as a unique cultural product and a valuable component of Navajo cultural identity. Educational channels integrate traditional and Western information and provide skills and knowledge that support individuals who choose to use Navajo-Churro wool. Figure 5.2 illustrates the broad scope of relationships among Navajo artisans who use Navajo-Churro wool, DBI board members, DBI educational programs, and social interaction.
Beginning in the center, the model shows cultural identity as the driving force behind the choice to use Navajo-Churro wool (Arrow #1). Using Navajo-Churro wool spurs individuals to raise Navajo-Churro sheep, gain knowledge about using Navajo-Churro wool, and enhance awareness of the historical, spiritual, and ecological value of Navajo-Churro sheep in Navajo culture. In addition, the processed fiber and textiles provide unique cultural products with a potential for improved economic return (Arrow #2). Individuals perceive that using Navajo-Churro wool contributes to Navajo cultural identity, and their interest in benefiting from using Navajo-Churro wool encourages participation in DBI. This provides information about the needs of the Navajo community and a source for attracting new DBI board members (Arrow #3).

Participation on a DBI board provides the benefit of gaining opportunities for learning and creative inspiration due to interaction with other board members and with DBI
resource networks. More specifically, board membership offers a means to learn about belonging to an organization and serve on a non-profit board. Board members learn more about democratic ethics, fund raising, and interactions with Navajos and non-Navajos in egalitarian settings. In addition, interaction among board members validates the importance of cultural identity as motivation to participate in DBI (Arrow # 4). Despite difficult meeting logistics, board members gain knowledge, self-assurance, and stimulation from their successes, and their continued participation sustains DBI as a community-based organization (Arrow #5).

Educational channels—the SiLC, workshops, spin-offs, school presentations, resource networks, and project coordinator—provide conduits for supporting the use of Navajo-Churro wool and affecting culture change. Board members also consider educational channels a structured way to give back to the Navajo community (Arrow # 6). From the educational channels, individuals learn traditional and Western methods of small flock management and ways to improve income from Navajo-Churro sheep and wool. Educational channels spur the creative energy of board members, who take greater individual interest in obtaining Navajo-Churro sheep and working with Navajo-Churro fleece (Arrow # 7). In addition to providing structured educational channels, board members tend to increase one-on-one communication about Navajo-Churro sheep and wool with individuals in their families and chapters (Arrow # 8). These informal interactions reinforce cultural identity by encouraging individuals to share information about fiber technology and sheep care, in particular across generations and often with the Navajo language.

The sustainability of this model relies on maintaining harmony among the three major components, an especially appropriate concept for Navajo culture. Harmony is a primary
priority of Navajo culture. When DBI board members share their resources through educational channels, for example, then individuals who use Navajo-Churro wool continue to benefit from DBI—and they provide a source of new board members and new ideas for educational channels. This sustains all three components of the model. On the other hand, if board members do not share resources through educational channels (if Arrow # 6 is disrupted), then DBI sustains only itself in the form of current board members and loses its source of new board members who can introduce fresh ideas (only activities represented by Arrows # 4 and # 5 will continue). Or, if an individual or family does not contribute new ideas or volunteer for boards, then only the individual or family’s use of Navajo-Churro sheep and wool will be sustained (Arrow # 3 is disrupted, and only activities represented by Arrows #1 and #2 will continue).

**Summary**

DBI relies on educational channels as essential conduits that capture and maintain interest in the choice to use Navajo-Churro sheep and wool. Serving on a DBI board, using Navajo-Churro wool, and providing educational channels are all embedded in the desire to strengthen Navajo cultural identity. Applying the information from this study to a larger discussion about artisan sustainability and Navajo culture will contribute to the body of scholarship from which this research originated. Chapter Six will describe contributions to existing literature, suggest applications of results to community-based sustainable development, recommend further research, and summarize the study.
CHAPTER SIX: CONCLUSIONS, APPLICATIONS, AND SUMMARY

The purpose of this interpretive study was to explore inductively a factor of artisan sustainability, specifically a traditional fiber resource used to make a traditional textile. The study focused on Diné bé’ iíná, Inc. (DBI), a community-based organization that influences the restoration of the fiber resource. The final objective of this study was to determine how the study contributes to topics in the existing literature that generated the research questions. This chapter addresses that objective with conclusions that place research results into the broader context of existing literature. Suggestions for applications to community-based sustainable development, recommendations for further research, and a summary of the study conclude this chapter.

Contributions to Literature

The objectives for this study directed the inquiry, and results contribute to the existing literature that supported the study’s design: Navajo-Churro sheep and wool, sustainable development, and textile handcraft traditions.

Navajo-Churro Sheep and Wool

Navajo-Churro sheep have provided a traditional fiber resource in the form of fleece with a range of natural colors, long staple, little crimp, and low grease content favored by Navajo textile artisans who choose to hand spin wool for weaving. One objective of this study was to contribute to existing literature about Navajo-Churro sheep and wool. This study not only strengthens the basic tenets about Navajo-Churro sheep and their relationship to Navajo textiles described in the literature, it contributes to knowledge about the inter-relationship of Navajo-Churro sheep with cultural identity, especially gender and language. The study adds to an understanding of Navajo-Churro sheep and wool as unique cultural
products and illustrates ways that DBI uses educational channels to restore Navajo-Churro sheep and wool. Results also suggest components that contribute to the sustainability of the organization itself.

**Navajo-Churro sheep as a local breed.** Literature about the domestication of sheep describes a predominant preference for selectively breeding sheep for commercial white fleece and fine wool, rather than coarse, natural colored wool (Ryder, 1990, 1997; Smith et al., 1997; Sponenberg & Bixby, 2000). Renewed interest in natural colored fleece for the fiber handcraft market, however, has restored a margin of status to the wool of Navajo-Churro sheep. Literature that promotes breed diversification tends to emphasize the importance of conservation of genetic resources in local breeds that are vulnerable to a perceived lack of economic value, or at the low end of economic value in generating income (ALBC, 2004; FAO, 2000; Geerlings et al., 2002; Robson, 2000). Navajo-Churro sheep fit the profile of a local breed that possesses such beneficial traits as disease-resistance and desert adaptations. Additional literature points out that conserving genetic diversity strengthens cultural diversity (Köhler-Rollefson, 2001; Sponenberg & Bixby, 2000).

Foremost in this study is the linkage between returning the Navajo-Churro sheep and strengthening cultural identity.

**Navajo-Churro sheep and cultural identity.** The Apache de Navajo people obtained sheep from the Spanish and brought them into their culture. One objective of this study was to identify and define components of Navajo cultural identity that participants associate with Navajo-Churro sheep and wool. Interestingly, participants express little desire to strengthen individual identity through the return of the Navajo-Churro; instead, participants emphasize strengthening cultural identity for their own families and for the Navajo people. Participants
emphasize that the physical return of the sheep was the primary goal of Diné be' iiná (DBI). Apparently, the physical possession of Navajo-Churro in itself strengthens cultural identity. In some cases, owning Navajo-Churro sheep represented a living connection with family and ancestors, especially grandparents.

The study asserts the cultural value of owning Navajo-Churro sheep, and it also succeeds in identifying and defining consensus about factors that participants consider components of cultural identity (the sub-themes of cultural identity): awareness, agropastoral heritage, traditional life learning, family cohesion, gender, and language. These components define group identity for DBI members and for other proponents of restoring Navajo-Churro sheep. Among these, data that concern gender and language will be considered in greater detail.

Research results contributed to the view of gender among contemporary Navajo weavers. In the past, popular images (postcards and tourist brochures, for example) and fiber niche publications have tended to depict women as the predominant, if not exclusive, weavers among the Navajo people. Historically, the American Arts and Crafts movement (Hobbs, 1988) and the tourism industry (Dilworth, 1996; Howard & Pardue, 1996) in particular used romanticized images of the Navajo woman herding sheep, processing wool, and weaving as an icon for Navajo culture. Early documents indicate small numbers of men who were excellent weavers (National Archives Document 74651, cited in Rodee, 2002).

Recent exhibitions and publications, however, counter this depiction with the inclusion of Navajo men as weavers. In 1998, the Navajo Nation Museum presented an exhibition of weavings by Navajo men, and a recent book about Navajo weavers features men who weave (Carter, 2003). Data from this study contributed evidence against rigid
gender boundaries for weaving and processing wool among both historic and contemporary artisans. In-depth interview data included references to a heritage of male weavers in certain participants’ families. Male participants challenged historic documentation about Navajo gender roles related to wool processing and weaving. The elementary-age son of a male weaver had sold a weaving at the Santa Fe Indian Market.

At the same time, female participants who helped found DBI considered the initial structure of DBI an expression of matrilineal Navajo culture. These participants relate that DBI had established its first board of directors composed solely of women, intending the board as an expression of their desire to reclaim a degree of matrilineal heritage. During the 1970s and 1980s when McNeal located and purchased Navajo-Churro sheep on the Navajo Nation for the Navajo Sheep Project at Utah State University, he dealt primarily with Navajo women (Jones, 2000). Interestingly, one study contends that sheep herding appears to have increased the status of women when the Navajo people adopted pastoralism as a lifeway (Roessel, 1951).

Participant observation reinforces the interview data about gender. At the time of the study, women often owned the sheep, and female weavers outnumbered male weavers. Ideological commitment to the DBI mission and knowledge of weaving, however, appears to outweigh gender as a factor of importance among DBI members. Men serve on DBI boards, and three of the five male participants in the study process wool and weave textiles. During the pre-celebration Sheep is Life Celebration (SiLC) workshops, an elementary age boy participated in a school weaving program. The DBI executive board had elected its first male president, who later assumed the position of project director. Neither board members nor educational programs appear to discriminate on the basis of gender.
The persistence of a spoken and written language has been linked with the strength of cultural identity. A decline in the number of indigenous language speakers within a culture may represent a pressing concern. Among the nearly 400 Native American languages spoken north of Mexico during historic times, all except 45 were no longer spoken or taught in 1995 (Oswalt, 2001). On the Navajo Nation, US Census 2000 reported that 54% of people 18 years and older spoke Navajo, although only an approximate 10% of 5- to 17-year-olds spoke Navajo (Choudhary, 2000). These figures indicate a dramatic decline in the number of Navajo speakers on the Navajo Nation within one or two generations.

In contrast, in-depth interview data reveal that all Navajo participants in the study spoke the Navajo language, though with varying degrees of facility. The majority of participants had attended boarding schools, or had attended off-reservation schools, where they learned fluent English. Some participants specified that DBI had provided opportunities to practice and to improve their Navajo speaking skills—to consult with elders about the restoration of Navajo-Churro sheep, for example. One participant, a teacher by profession, was studying formal classes in Navajo linguistics at Diné College. Participant observation supported the interview data about language. During DBI meetings, board members usually spoke English, but at times an individual would also choose to speak Navajo.

The demise of language diversity has been linked with the loss of biological diversity, especially that of local breeds associated with indigenous cultures (Geerlings et al., 2002; WWF, 2000). Participants in this study, however, speak the Navajo language and are restoring Navajo-Churro sheep as a local breed. This appears to link retention of indigenous language skills with a gain in biological diversity. Speaking Navajo may indicate greater individual awareness and a stronger link with Navajo cultural identity and perhaps with
family heritage. Speaking Navajo may be more than a convenient skill that allows DBI members to communicate with a wider range of the Navajo Nation population; speaking Navajo may serve as an indicator of commitment to DBI goals and willingness to serve as a DBI board member.

Cultural Products

When the Apache de Navajo people obtained sheep from the Spanish, their weavers adopted their wool and created products unique to the Navajo culture. Another objective of this study was to identify characteristics that Navajo artisans use to define Navajo-Churro wool as a unique product of Navajo culture. Data revealed that participants designated natural colors and wool characteristics as unique qualities related specifically to Navajo textile traditions. They also identified the potential for adding value to Navajo textiles by branding Navajo-Churro wool as a product that has unique cultural ties with the Navajo Nation. In addition, the labor-intensive work needed to prepare Navajo-Churro fleece had encouraged social interactions among the Navajo people in the past. The sub-themes of natural colors and wool characteristics will be examined in greater detail.

Natural colors. Growing interest in mainstream fiber handcrafts during the 1970s had revived the market for natural colored fleece and yarn (Smith et al., 1997). Data from this study demonstrates a continuing enthusiasm for natural colored fleece and wool among Navajo weavers and non-Navajo artisans. The opportunity to purchase natural colored yarn and fleece at the SiLC—and at other sheep and wool festivals around the nation—attracts Navajo and non-Navajo artisans. In addition, dozens of producers and shops advertise natural colored yarn in mainstream niche fiber craft publications and on the Internet. The literature tends to mention natural colors of Navajo-Churro wool only in conjunction with such
characteristic regional weaving styles as Two Gray Hills. Interview and observation data indicated Navajo weavers place high value on the natural colors of Navajo-Churro wool, which suggests interest extends beyond this style.

Reichard (1936) documented Navajo weavers who resisted cross breeding their Navajo-Churro sheep with improved breeds. Similarly, participants remember weavers in their families who resisted or refused to cross breed their Navajo-Churro sheep with improved breeds. Weavers maintained small flocks of Navajo-Churro sheep as a source of fleece for their own weaving or to share and trade with other weavers. The Two Gray Hills Trading Post kept a small flock of Navajo-Churro sheep specifically for the natural colors essential to that regional style (Les and Irma Wilson, personal communication, January 29, 2004). Weavers who retained small Navajo-Churro flocks, kept separate from other breeds to preserve their natural colors, have received little attention in the literature. During the 1930s, however, the Southwestern Range and Sheep Breeding Laboratory (SRSBL) found at least 800 Navajo-Churro sheep in remote areas of the reservation (Blunn, 1940). Perhaps the sheep procured by the laboratory were from those small flocks that were never crossbred because the weavers had valued the colors. In contrast, one participant with deep traditional knowledge pointed out that not all Navajo weavers prefer Navajo-Churro fleece. Some weavers prefer introduced breeds and reserve Navajo-Churro fleece for ceremonial purposes.

Fleece characteristics. Research from the SRSBL had documented Navajo-Churro fleece characteristics that are well-suited for spinning on a Navajo hand spindle and for weaving into durable tapestries on the Navajo style loom (Blunn, 1940, 1943; Grandstaff, 1942; Phillips, 1941). Nevertheless, it had not proven economically sound, or even possible, for many weavers to use the time-consuming process of preparing the wool from sheep to
loom—the mainstream collecting market and trading posts did not pay more for a weaving with handspun wool. Most weavers grew accustomed to purchasing commercial yarns at trading posts (Hedlund, 2003; Rodee, 1987; Wheat, 2003). Wheat estimated that by 1980 fewer than 10% of Navajo weavings were made from hand processed, local wool. More women entered the wage economy, which decreased reliance on weaving income and the informal economy (Choudhary, 2003).

Interview data reveal that participants who are weavers value Navajo-Churro sheep for fleece characteristics well suited to Navajo textile traditions. Two participants pointed out certain ewes whose fleece they can spin directly from shorn fleece, by-passing the carding process. In addition, participant observation confirms that Navajo artisans who want to process Navajo-Churro wool for weaving are eager to adopt introduced carding and spinning tools that can get them to the loom faster. At the SiLC and at monthly spin-offs, Navajo artisans shared and learned to use such tools as drum carders and spinning wheels.

*Educational Channels*

Much of the traditional knowledge of indigenous pastoralists has been disregarded by mainstream agricultural development. A growing consensus, however, emphasizes the value of traditional knowledge about local livestock breeds (Chambers, 1983, 1997; Geerlings et al., 2002; Köhler-Rollefson, 2001; Sponenberg & Bixby, 2000). For local production of a local breed to succeed, however, there is also a need to learn ways to generate new markets, ensure access to grazing, promote the care of small herds, attract the interest of youth, and raise funds to support the integration of traditional knowledge with Western knowledge:

> Herding animals often carries the stigma of being a backward profession. Making livestock keeping a more attractive proposition for youths from pastoral/rural backgrounds—by proving training that builds on traditional knowledge, concepts and
values, but also includes appropriate modern technologies—is an avenue that should be explored (Köhler-Rollefson, 2001).

Data from this study demonstrate the importance of this approach. Participants and observation reveal ways that DBI uses educational channels to integrate traditional and Western knowledge. For example, non-Navajo consultants provide Western knowledge of legal requirements, grant writing, and care of small flocks, and Navajo consultants and DBI members contribute traditional knowledge about Navajo-Churro sheep. It is noteworthy that Anglo consultants do not appear proprietary toward DBI events and responsibilities.

**Organizational Sustainability**

The major themes of cultural identity, unique cultural products, and educational channels must be institutionalized to be sustainable. Sustaining an organization created through development intervention presents serious challenges. The shift from top-down to more grassroots, community-based approaches to development appears to offer the most promising option for sustaining development intervention (Chambers, 1987, 1997; Köhler-Rollefson, 2001). Another objective of this study was to assess factors that will sustain DBI as a community-based organization.

Köhler-Rollefson (2001) approaches sustainable development as an advocate for domestic livestock diversity. She specifies incentives that sustain pastoralism in a local community: Recognize local breeds as national and global assets, provide access to grazing, create marketing opportunities, and combine traditional knowledge with Western technology. The most critical incentive is creating demand for the products of a local breed and marketing value added products. This study showed that DBI subscribes to these practices; the ANA grant in particular focuses on working with specific chapters and families to
develop value added businesses. As described above, DBI integrates traditional knowledge with Western technology to care for sheep and process wool. Grazing permits complicated by severe drought, however, has limited access to grazing. The content of educational programs indicates that DBI believes the future of Navajo pastoralism lies with small flocks and with marketing to Navajo artisans and to non-Navajo fiber handcraft markets.

According to Chambers (1983, 1997) a community-based organization is sustained by building capabilities among those who are most closely involved with the work. This study supported the Chambers model for sustainable development. Board members in leadership positions had acquired or strengthened certain capabilities. The study distinguished capabilities in which the most learning had occurred from capabilities that needed more attention. More specifically, although board members had learned ways to become involved with an organization and how to serve on a board, some appeared uncertain about their roles. Wool processing emerged as the largest area of craftsmanship capability that participants did not possess when they joined DBI. More participants had learned about the hands-on process of wool processing than any other capability. The information indicated that DBI had recognized and provided ways to learn the capability of wool processing.

According to the development model elaborated by Sen (1993, 1997), members of a community-based organization not only need to develop capabilities, they need to learn to apply their learned capabilities. This study revealed ways that DBI board members in leadership roles applied what they learned while working with DBI. Examples include writing a graduate school application, writing a grant, marketing fiber products, and managing small flocks. It is essential to distinguish between the opportunity to apply learned capabilities and acknowledging that some capabilities require full time, professional
expertise: legal guidance, business management, fundraising. For example, DBI relies on
grants as its major funding source. To date, a non-Navajo consultant has written the grants,
with one exception, based on ideas contributed and discussed by DBI board members. In the
competitive world of fund raising, writing grants represents a capability that is its own
specialized career track (the ‘funding game’) (Sherry, 2002).

Suggestions for Applications

The results of this study suggest ways DBI has influenced the restoration of a
traditional fiber resource used to make textiles with cultural and economic value. Other
community-based organizations that wish to contribute to artisan sustainability by restoring a
traditional fiber resource may generalize from the results of this study about DBI and
Navajo-Churro sheep. This section lists inductively derived arguments for restoring a
traditional fiber resource and suggests applications for other community-based development
efforts.

Arguments for Restoring a Traditional Fiber Resource

One objective of this study was to identity the compelling rationale for restoring
Navajo-Churro wool as a traditional fiber resource for Navajo artisans. Results from this
study inductively generated two categories of arguments—pragmatic and cultural—for
restoring Navajo-Churro sheep as a traditional fiber resource derived from a local breed. The
following lists organize these arguments.

First, Navajo-Churro sheep and wool as a traditional fiber resource is valuable for
economic, pragmatic reasons. Restoring Navajo-Churro sheep and wool may:

- Increase the choice of raw materials to use for making textiles
- Allow for selective breeding of fiber qualities preferred by artisans
Conserve water and feed—local breed can survive on marginal land

Lessen the need and expense of medication due to disease resistance

Decrease the time required for maintenance of a well-adapted breed

Assign control of production of raw materials to artisans

Assign control of quality and price of raw materials to artisans

Insulate artisans from outside market fluctuations in price of raw materials

Decrease dependency on middlemen who control external raw materials

Create alternative sources of livelihood within the local community

Provide materials for the restoration of vintage textiles

Generate greater economic return from textiles that are culturally branded

Provide identical fiber for completing a textile in progress

Generate income from tourism (eco-tourism in particular—workshops, festivals, celebrations)

Conserve genetic biodiversity of a local breed

Second, Navajo-Churro sheep and wool as a traditional fiber resource is valuable for reasons related to culture. Restoring Navajo-Churro sheep and wool may:

Reinforce cultural identity

Encourage family cohesion (care of the fiber resource as a family)

Provide a conduit for traditional cultural education for children

Contribute to cultural diversity (following the conservation of biodiversity)

Preserve traditional knowledge associated with care of local breeds

Preserve language skills

Encourage multi-generational communication
Allow choices about ways to integrate traditional and Western knowledge

Applications to Community-Based Organizations

These two lists, which describe study results about Navajo-Churro sheep as a traditional fiber resource, may prove useful to other community-based organizations that strive to restore local breeds as traditional fiber resources for textiles. Other organizations can generalize and use these arguments to strengthen grant applications, encourage community involvement in development strategies, and toughen appeals to gain support from governing agencies. Perhaps the most cogent result from this study is the effectiveness of approaching development strategies from the viewpoint of artisans, the makers of textiles.

Emphasize cultural identity. Results of this study suggest that artisans may tend to focus more on the social and cultural value than on the ecological value of a traditional fiber resource. Participants in this study emphasized topics related to Navajo cultural identity more often than topics related to ecology or the environment. These results indicate that efforts to restore a fiber resource will benefit from understanding the critical linkages between the fiber resource and cultural identity. An organization needs to consider ecological, social, and economic facets of sustainability. Although the organization may have ecological or economic reasons for restoring a traditional fiber resource, their development strategy needs to identify and address components of cultural identity linked with the fiber and fiber resource. In addition, a development strategy that emphasizes the importance of cultural identity may access traditional knowledge and local resources within a region and a culture.

Define cultural products. This study suggested ways that Navajo artisans and sheepherders identified Navajo-Churro wool and wool products (fleece, yarn, textiles) as unique cultural products. A community-based organization that wants to contribute to artisan
sustainability by restoring a traditional fiber resource needs to identify and define the products that artisans value—and the benefits that may be placed on working with a traditional fiber and fiber resource. Navajo spinners and weavers, for example, referred to the range of natural colors as a benefit of Navajo-Churro wool.

*Emphasize process.* There is evidence that artisans are least willing to negotiate specific techniques of working with fiber, and that they are more willing to negotiate color and motifs. Additionally, artisans may be more attached to the process of working with fiber than to the product, especially when products are sold after completion. An organization that wants to sustain artisans will need to understand the importance of the process of working with fiber resources.

*Clarify gender roles.* This study indicates that gender roles among Navajo sheepherders and weavers change over time—and also suggests that gender roles have been misrepresented and misinterpreted. An organization needs to identify gender roles related to responsibilities for traditional fiber resources.

*Identify leadership.* The characteristics of DBI board members may indicate ways to identify potential leaders in a community-based organization. Characteristics include speaking the indigenous language, deep cross-generational connections, teaching expertise, and a desire to give back to the community. A community-based organization can apply this information by tapping members for leadership who show these qualities.

*Train management.* Leaders need to understand their roles and responsibilities to function as effective leaders in management positions. Some of the participants in this study tended to express uncertainty about their roles as board members, in particular those without previous board experience. A written guide that describes roles and responsibilities,
reinforced with a day of board training, could introduce new board members to their roles and responsibilities. In addition, assigning an experienced board member as a mentor for a new board member can educate inexperienced officers about their new responsibilities. An organization can initiate board training for new members to avoid this possible frustration with this challenge.

**Acknowledge constraints.** Goals set by an organization need to consider the range of constraints faced by their membership. This study reveals constraints related to travel time and distances, communication infrastructure, and family and work demands that posed challenges for DBI leaders. A community-based organization needs to conduct a realistic assessment of such constraints among its membership before setting goals. If an organization were to set a goal to develop a web site intended to market its membership’s handcrafted textiles, for example, that goal assumes that artisans have equal access to a digital camera and computer. Although the organization could purchase the equipment, artisans living in remote regions may not have access due to travel and communications constraints. A realistic method to incorporate such constraints into the organization’s goal could include an intermediary who travels to the artisans in remote regions to photograph and document their textiles.

**Recognize stages of the organization.** This study described DBI history and stages of development. Although the mission to restore Navajo-Churro sheep remained the same over time, DBI changed when its membership and leadership changed. The organization had to adjust its definition of membership, for example, to accommodate the expectations of potential members. In addition, DBI at the time of this study appeared to have lost much of the history of the organization. Other community-based organizations can learn flexibility in
the face of the inevitable changes that occur. In addition, they can make a conscious decision to convey a sense of their history to new members, especially new leadership.

*Integrate traditional and Western educational channels.* Interviews and observation in this study revealed that individuals from different cultures and educational backgrounds contributed toward organizational sustainability. Members of DBI drew upon this multicultural expertise to generate a broader range of choices for the Navajo people, sheepherders and artisans in particular. These choices include both the reintroduction of traditional Navajo teachings and contributions from Western methods. Other organizations can refer to this model that offers a range of choices and attempts to integrate traditional and Western knowledge.

**Recommendations for Further Research**

The close association between the Navajo artisans and Navajo-Churro wool indicates the need for more research focusing about the relationship of cultural identity and traditional fiber resources in other indigenous cultures. As described in Chapter Two, the literature often relies on economic indicators as the foremost rationale for introducing raw materials. No other studies were found in which a traditional fiber resource was linked so intimately with cultural identity, with the possible exception of Chiapas sheep. The significance of gender in sustainable development deserves attention—how does including women in development intervention relate to sustainability in different cultures?

Analysis of other community-based organizations, such as artists’ co-ops and farmers’ markets, provides additional information about the importance of traditional resources in the members’ lives. Again, the role of gender deserves attention. Are there
distinctions between the relationships that women and men establish with traditional resources?

Ways that community-based organizations address the problems posed by specific constraints deserves more research attention. How can organizations make technology work harder to serve the organization and its membership? This study indicated the critical role of the communications infrastructure, for example. The technology available to process fiber resources also deserves attention. What tools have been developed in Western technology, for example, that will expedite fiber processing and help artisans improve economic return for their textiles?

Learning to market unique cultural products directly emerges as one primary goal of participants in this study. Ways to implement equitable opportunities for direct marketing is a topic that deserves attention, as does the variety of ways that artisan entrepreneurs have devised to add value to Navajo-Churro wool. This requires an evaluation of the communications infrastructure available to Navajo artisans, however; some live in isolation without phone service while others have access to computer technology at home or at work. A survey of the access to communications and travel amenities need to precede development intervention to assure fair access to sources and markets.

A traditional fiber resource closely linked with cultural identity also raises questions about who owns traditional knowledge associated with the resource. How can the Navajo people ‘brand’ Navajo-Churro wool for the non-Navajo, off-reservation fiber handcraft market? How can consumers of fiber handicrafts be identified? How can Western legal precepts be applied to protect ‘intellectual property rights’ associated with traditional knowledge?
Summary

The purpose of this interpretive study was to explore inductively a factor of artisan sustainability, specifically a traditional fiber resource used to make a traditional textile. The study focused on a community-based organization that influences the restoration of the fiber resource. Research questions asked about factors that link Navajo-Churro sheep and wool with cultural identity, about ways that DBI sought to restore Navajo-Churro sheep and wool, and factors that have contributed to sustaining DBI as a community-based organization.

Sustainability models from Chambers (1983, 1997) and Sen (1993, 1997) guided the research, and theory related to textile handcraft traditions and change informed the analysis of content. Data were collected from participant observation and in-depth interviews during field research that spanned one year. Fifteen participants who represented organizational leadership and other involvement with DBI were interviewed on or near the Navajo Nation. All participants had been actively involved in the DBI mission to restore a traditional fiber resource to Navajo lands and people. The sample population was purposively selected to include the DBI executive board, key representatives from the advisory board, founding members, a DBI employee, and a new DBI member. The interview document gathered demographic information about the DBI leaders in particular, and on the goals of individual members and DBI as an organization. Data analysis followed Glaser and Strauss (1967) methods for constant comparative methods for coding and interpretation.

Over-arching major themes of cultural identity, cultural products, and educational channels emerged from content analysis of the data. Results identify educational channels as the primary method used to promote Navajo-Churro sheep and wool as a unique cultural product intimately linked with Navajo cultural identity. Results define factors involved with
sustaining DBI as a community-based organization. Minor themes and sub-themes, separate categories grouped by like associations, emerged under major themes.

An inductively derived model for the sustainability of a traditional fiber resource was developed from the major themes. The model indicated that balance and harmony are required to sustain the fiber resource, artisans, and the organization itself. The model demonstrates that the restoration of a traditional fiber resource as a unique cultural product exists hand in hand with cultural identity and craftsmanship. Through educational programs that integrate traditional and Western skills and knowledge, DBI seeks to restore a traditional fiber resource. In turn, sustainability depends on committed leadership, community outreach, ethical standards, funding sources, and building board member capabilities. Organizational leadership recruits new members into leadership positions and maintains high ethical standards when resolving conflicts and making decisions. DBI members who learn to participate in the organization, in particular on a non-profit board, gain self-assurance. Board members bring substantial capabilities to their work with a community-based organization, and they improve business, communications, and craftsmanship skills.

Through educational channels, DBI members consciously integrate and balance traditional knowledge with Western practices. DBI members apply Western learning to reinforce traditional cultural identity. The participants in this study describe DBI as a conduit through which to express their personal ideological commitment to the restoration of a traditional fiber resource intimately linked with the cultural identity of the Navajo people.
APPENDIX A: INTERVIEW DOCUMENT
Part I: Information about DBI and your involvement with DBI

First, I’d like to ask some questions about Diné be’ii na’ (DBI).

1. Will you please tell me about the purpose and activities of DBI?

2. What was happening in 1991 that led to the formation of DBI?

3. Who can join DBI and what benefits do you see from membership?

4. How do members become executive or advisory board members?

5. How are decisions made about DBI’s goals and activities?

Next, I’d like to ask some questions about your involvement with DBI.

6. What is your position with DBI now? When and why did you join and volunteer for a board position?

7. How did you first learn about DBI?

8. Was there anyone in particular who influenced your joining DBI or volunteering for a board position?

9. How much time do you spend, on average, during a month (or year), working with DBI (hours/day or days/month)?

10. What specific DBI events, meetings, or other activities have you participated in and how far do you have to travel for DBI meetings or events?
11. Which particular knowledge or skills do you use in your work with DBI? Did you already know these when you joined or have you learned during your work with DBI?

- Business skills
- Herding
- Weaving
- Wool processing
- Teaching
- Speaking
- Giving demonstrations
- Working with youth or elders
- Writing
- Marketing
- Computer skills
- Other

12. In your opinion, what are some examples of the most valuable changes that have resulted from DBI’s influence?

13. What have been the most difficult problems you have seen DBI face, and how have these been resolved?

**Part II: Influence of DBI**

*Now I’d like to ask about ways that DBI has influenced your life and community.*

14. Since you joined and started working with DBI, what do you think are the most important new skills and knowledge you and others in your community have gained? What would you like to gain in the future?

15. What was your involvement with sheepherding, weaving, and Navajo-Churro sheep before you joined DBI (including both family heritage and education)?

16. What changes have you experienced in your involvement with sheepherding, weaving, and Navajo-Churro sheep after you joined DBI?

17. Has DBI helped you make a better living? Do you know others in your family or community who have benefited economically because of DBI?

18. What is your favorite and your least favorite part about DBI?

19. Would you like to continue to be a member of DBI? To volunteer for work with DBI?

20. What goals would you like to see DBI set for the future, and how do you think DBI can reach those goals?

21. Is there anything else you would like to tell me about DBI and your work with DBI?
APPENDIX B: INFORMED CONSENT DOCUMENT
INFORMED CONSENT DOCUMENT

Title of Dissertation: The Influence of a Community-Based Organization on the Sustainability of a Traditional Fiber Resource
Principal Investigator: Susan M. Strawn, Ph.D. Candidate, Iowa State University
Dissertation Advisor: Mary A. Littrell, Ph.D., Professor, Iowa State University

This is a research study. Please take as much time as you need deciding if you would like to participate. Feel free to ask questions at any time.

Introduction
The purpose of this study is to learn about the ways that Diné bi' iina' as a community-based organization influences the sustainability of a traditional fiber resource (Navajo-Churro sheep). I am also interested in knowing how Diné bi' iina' has influenced Navajo weaving and the lives of Navajo weavers. You are being invited to participate in this study because you are a member of Diné bi' iina'.

Description of Procedures
If you agree to participate in this study, your participation will last during the one to two hours required for an interview. During this study, I will interview you in your home or office about your involvement with Diné bi' iina' and the influence of Diné bi' iina' and Navajo-Churro sheep on your life and your community. I will tape our conversations during the interview. There are no risks, costs, or compensations to you for participating in this study. It is hoped that the information gained in this study will benefit the Navajo Nation and society by providing valuable information about the ways that a community-based organization can influence the sustainability of a traditional fiber source (Navajo-Churro). It is also hoped that the study will provide Diné bi' iina' with a sense of its own history and influence of its work and will contribute information about the relationship of Navajo-Churro sheep to the sustainability of Navajo weaving.

Participant Rights and Confidentiality
Your participation in this study is completely voluntary. You may stop the interview at any time. You may refuse to participate, and your refusal will involve no penalty or loss of benefits to which you are otherwise entitled. You may also discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. Records identifying participants will be kept confidential and will not be made publicly available. To ensure confidentiality to the extent permitted by law, the following measure will be taken:

1) Each participant in the study will be assigned a unique code and letter that will be used on forms instead of their name.
2) Only the principal investigator will have access to study records.
3) Study records will be kept in a locked filing cabinet and in protected computer files and disks for at least five years.

If the results are published, your identity will remain confidential unless I receive your written permission to use your name.
Questions or Problems
Please ask questions at any time during this study. For further information about the study, contact Susan M. Strawn, 1055 LeBaron Hall, Iowa State University, Ames IA 50011-1120; sstrawn@iastate.edu; 515-450-8316 or Dr. Mary A. Littrell, 1058 LeBaron, Iowa State University, Ames IA 50011-1120; mlittrell@iastate.edu; 515-294-5284. If you have any questions about research permissions, please contact the Human Subjects Research Office, 2810 Beardshear Hall, (515) 294-4566; austingr@iastate.edu or the Research Compliance Officer, Office of Research Compliance, 2810 Beardshear Hall, (515) 294-3115; dament@iastate.edu

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Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered. You and I will each receive one copy of the signed and dated written informed consent before you participate in the study.

Name
(printed)____________________________________________________________________________________

(Signature)________________________________________________________________________ (Date)
ASSENT FORM FOR MINOR

Title of Dissertation: The Influence of a Community-Based Organization on the Sustainability of a Traditional Fiber Resource
Principal Investigator: Susan M. Strawn, Ph.D. Candidate, Iowa State University
Dissertation Advisor: Mary A. Littrell, Ph.D., Professor, Iowa State University

This is a research study. Please take as much time as you need deciding if you would like to participate. Feel free to ask questions at any time.

Introduction
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Description of Procedures
If you agree to participate in this study, your participation will last during the one to two hours required for an interview. During this study, I will interview you in your home or office about your involvement with Diné bi’iina' and the influence of Diné bi’iina' and Navajo-Churro sheep on your life and your community. I will tape our conversations during the interview. There are no risks, costs, or compensations to you for participating in this study. It is hoped that the information gained in this study will benefit the Navajo Nation and society by providing valuable information about the ways that a community-based organization can influence the sustainability of a traditional fiber source (Navajo Nation and society) and Navajo weaving. You are invited to participate in this study because you are a member of Diné bi’iina'.

Participant Rights and Confidentiality
Your participation in this study is completely voluntary. You may stop the interview at any time. You may refuse to participate, and your refusal will involve no penalty or loss of benefits to which you are otherwise entitled. You may also discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. Records identifying participants will be kept confidential and will not be made publicly available. To ensure confidentiality to the extent permitted by law, the following measures will be taken:
1) Each participant in the study will be assigned a unique code and letter that will be used on forms instead of their name.
2) Only the principal investigator will have access to study records.
3) Study records will be kept in a locked filing cabinet and in protected computer files and disks for at least five years.

If the results are published, your identity will remain confidential unless I receive your written permission to use your name.
Questions or Problems
Please ask questions at any time during this study. For further information about the study, contact Susan M. Strawn, 1055 LeBaron Hall, Iowa State University, Ames IA 50011-1120; sstrawn@iastate.edu; 515-450-8316 or Dr. Mary A. Littrell, 1058 LeBaron, Iowa State University, Ames IA 50011-1120; mlittrell@iastate.edu; 515-294-5284. If you have any questions about research permissions, please contact the Human Subjects Research Office, 2810 Beardshear Hall, (515) 294-4566; austinsr@iastate.edu or the Research Compliance Officer, Office of Research Compliance, 2810 Beardshear Hall, (515) 294-3115; damenK@iastate.edu

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Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered. You and I will each receive one copy of the signed and dated written informed consent before you participate in the study.

Participant’s Name (printed)

(Signature) (Date)

(Signature of Parent/Guardian or Legally Authorized Representative) (Date)
APPENDIX D: CONSENT TO PHOTOGRAPH
Standard Release for Photography

Today's Date:______________________________________

Participant's Name:__________________________________

I hereby authorize Susan Strawn to publish the photographs taken of me, and my name, for use in a dissertation, printed publications, and web sites.

I acknowledge that since my participation in publications and web sites is voluntary, I will receive no financial compensation.

I further agree that my participation in any publication and web site confers upon me no rights of ownership whatsoever. I release Susan Strawn from liability for any claims by me or any third party in connection with my participation.

Signature:__________________________________________

Street Address:____________________________________

City, State, Zip:____________________________________
APPENDIX E: DINÉ BE' IIHÁ (DBI) LETTER OF CONSENT
3 October 2003

Susan Strawn, Textile Department
1055 LeBaron Hall
Iowa State University
Ames IA 50011

Dear Susan,

The DBI Board of Directors has carefully reviewed and discussed your proposal among ourselves and with other community members. I am pleased to inform you that DBI fully supports your research proposal, "The Influence of a Community-Based Organization on the Sustainability of a Traditional Fiber Resource and Textile Tradition," which you submitted to us, and we are honored to have been chosen to collaborate with you in this investigation. The Board members agreed to contribute their time to be interviewed by you and to help you with contact information for DBI founders and others who have been important to this work.

Since 1991, DBI has been dedicated to working with the Diné sheepherders and weavers to maintain the Navajo Sheep Culture, to restore status to sheep herding and textile traditions, and specifically to restore the Navajo-Churro sheep to our lands. We are a community-based organization that is managed by a volunteer board of directors. Recently, we received funding to hire a project director, which will enable us to move into another phase of serving the people. Your investigation comes at a critical point in DBI's history and can help all of us by documenting how the organization evolved to this point, giving us some perspective as we move forward into this new phase.

All the questions that you stated you would ask seem respectful and pertinent. We appreciate the provisions for confidentiality. The background information and bibliography that you will collect will be useful to us. Copies of the materials you collect will be beneficial for our archives. Your finished work will be useful to us for documentation as we seek to educate the public and the Navajo Nation about the importance of the Navajo-Churro sheep and Diné textile traditions.

Should you need additional information or support, please contact me at 928-656-3498 or roykady@dinewoven.com. You may give my contact information to any reviewers who would like confirmation of DBI's commitment to this project.

Thank you for undertaking this work and for the benefits its will bring to the Diné.

Sincerely,

Roy Kady, DBI President

PO Box 539, Ganado, Arizona 86505  www.navajolifeway.org
Diné be' iiná, Inc. is a nonprofit organization incorporated in the Navajo Nation.
APPENDIX F: HUMAN SUBJECTS CONSENT FORM
TO: Susan Strawn  
FROM: Human Subjects Research Office  

PROJECT TITLE: "The Influence of a Community-Based Organization on the Sustainability of a Traditional Fiber Resource and Textile Tradition"  

RE: IRB ID No.: 03-787  

APPROVAL DATE: October 28, 2003  
REVIEW DATE: October 22, 2003  

LENGTH OF APPROVAL: 1 Year  
CONTINUING REVIEW DATE: October 27, 2004  

TYPE OF APPLICATION: ☒ New Project ☐ Continuing Review  

The Human Subjects Review Study has been approved. Please make sure that you obtain the consent of the parents and participants before you conduct the study.  

Your human subjects research project application, as indicated above, has been approved by the Iowa State University IRB #1 for recruitment of subjects not to exceed the number indicated on the application form. All research for this study must be conducted according to the proposal that was approved by the IRB. If written informed consent is required, the IRB-stamped and dated Informed Consent Document(s), approved by the IRB for this project only, are attached. Please make copies from the attached "masters" for subjects to sign upon agreeing to participate. The original signed Informed Consent Document should be placed in your study files. A copy of the Informed Consent Document should be given to the subject.  

If this study is sponsored by an external funding source, the original Assurance Certification/Identification form has been forwarded to the Office of Sponsored Programs Administration.  

The IRB must conduct continuing review of research at intervals appropriate to the degree of risk, but not less than once per year. Renewal is the PI's responsibility, but as a reminder, you will receive notices at least 60 days and 30 days prior to the next review. Please note the continuing review date for your study.  

Any modification of this research project must be submitted to the IRB for review and approval, prior to implementation. Modifications include but are not limited to: changing the protocol or study procedures, changing investigators or sponsors (funding sources), including additional key personnel, changing the Informed Consent Document, an increase in the total number of subjects anticipated, or adding new materials (e.g., letters, advertisements, questionnaires). Any future correspondence should include the IRB identification number provided and the study title.
You must promptly report any of the following to the IRB: (1) all serious and/or unexpected adverse experiences involving risks to subjects or others; and (2) any other unanticipated problems involving risks to subjects or others.

Your research records may be audited at any time during or after the implementation of your study. Federal and University policy require that all research records be maintained for a period of three (3) years following the close of the research protocol. If the principal investigator terminates association with the University before that time, the signed informed consent documents should be given to the Departmental Executive Officer to be maintained.

Research Investigators are expected to comply with the University’s Federal Wide Assurance, the Belmont Report, 45 CFR 46 and other applicable regulations prior to conducting the research. These documents are on the Human Subjects Research Office website or are available by calling (515) 294-4568.

Upon completion of the project, a Project Closure Form will need to be submitted to the Human Subjects Research Office to officially close the project.

C: AESHM
APPENDIX G: NAVAJO NATION CLASS C PERMIT
January 20, 2004

Susan Strawn
Ph.D. Candidate in Textiles and Clothing
1055 LeBaron Hall
Iowa State University
Ames, IA 50014

RE: Permit C0329-B (Amendment No. 1 - Date of Extension)

Dear Ms. Strawn:

We have received your request to extend the date to your Permit No. C0329-B. With this amendment, the following project personnel are authorized to conduct non-collection cultural resources survey for the influence of a community-based organization on the sustainability of a traditional fiber resource for the period of JANUARY 20, 2004, through MARCH 31, 2004.

PERSON IN GENERAL CHARGE: SUSAN STRAWN
PERSON IN DIRECT CHARGE: MARY A. LITTRELL

SUPERVISORY/SPECIALIST PROJECT MEMBERS: AS ABOVE

If you have any questions, please contact Judie Lee at (920) 871-7145.

Sincerely,

[Signature]

[Name]
Historic Preservation Officer
xc: permit file
APPENDIX H: THEME DEVELOPMENT
THEME DEVELOPMENT

Emergent Major Theme: Cultural Product

Sample data representing cultural product theme:

Minor theme: Natural colors

One of the advantages of Churro sheep is the colors, the beautiful rich red brown. Maybe some other breeds can achieve those colors, but we already have Churro sheep that have those colors. They’re just so beautiful, and they’re natural colors. (08)

I wove, but I used commercial colors. Then one day my older sister . . . and her children introduced me to this [Navajo-Churro] wool. Oh, wow! This is so beautiful, and it’s natural. There’s nothing done to it. It is natural color. I just fell in love with it. (07)

Minor theme: Wool characteristics

The Navajo have lost touch with the Churro sheep and working with that particular fiber kind of went out. Most of the weavers buy their yarn from the trading posts. They don’t spin the wool any more. . . . My grandparents were told it was low quality wool, and they were introduced to the Ramboullets and the Merinos and the Columbians. They lost the knack of working with Churro wool, and at this day and age, very few weavers still recommend Churro wool. A lot of other weavers say it is just such a tough fiber. It is hard to work with. There are ways of working with Churro wool. That has to be re-learned. (09)

Sub-theme: Wool processing

After DBI, I got to learn more in-depth information about the sheep. The weaving I knew. It was in my family. But my involvement with DBI, I got to know the other side of it. You know, the processing, what you need to do, how to go about it, the value of it. (02)

Sub-theme: Spinning

If you’re shearing a yearling, a [Navajo-Churro] ewe, they have such soft, soft wool. . . . you can spin it really nice. (04)

A lot of people, the older folks, they remember. They say you can just spin when you shear. You can just spin when you shear it off. You don’t need to wash it and go through all that process. If they are clean, then you can do that. (13)

Sub-theme: Weaving

The Navajo-Churro wool is very valuable to us. We see it as a higher quality. We would rather have Navajo-Churro wool, a coarser wool, than a fine wool because we want our rugs
to endure anything they’re exposed to in the environment. . . . We use a lot of Churro wool to make the rugs because they’re a lot more durable. They can handle a lot more wear and tear over the years. We’ve always known that the wool was a lot hardier than a lot of different fine wool. (11)

Minor theme: **Value added**

Now you can’t sell wool any more [from reservation sheep]. They just accumulate each year, so one or two years they just didn’t know what to do with the wool. They just kept piling it, and they decided just to bum it. They bum a lot. (15)

My handspun weaving sells for more. The handspun 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, how to prepare it and everything. Now with this past year’s Sheep is Life, we have more involvement. People wanted to know how to prepare the wool, how to take care of the sheep itself, and then that Churro sheep wool is worth more than the other wool. (02)

Before when we had our weaving class, we just had commercial yarn. We didn’t do most of the dyeing and stuff like that. DBI explained that if you do the whole process, your rug will be worth a little bit more higher price. Take down all the notes that you have done, how you got the colors, how much time it took, where you got the plants, how many days to get to do the whole process of carding and spinning. (05)

Minor theme: **Social interaction**

At shearing time when it was time for some family to shear, by word of mouth people would find out. People just came together and helped each other out, did the whole wool shearing and processing, carding. It was just a big gathering with people cooking. And now people just don’t even want to step out their door and go a few yards next door and see that person—and it’s their grandmother. That was the sad part we were talking about. We’ll use fiber and sheep and wool to try and do a communal type of gathering again, and we’ll call it a spin-off. It’s been a success everywhere we went. (01)

Sub-theme: **Social interaction within families**

I know a lot of my community members, they are into getting their children involved. Their children are more 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 [to process wool and weave] as a family. (05)
THEME DEVELOPMENT

Emergent Major Theme: Organizational Sustainability

Sample data representing organizational sustainability major theme:

Minor theme: **Committed leadership**

I think their responsibility has to do with being leaders and exhibiting those leadership skills. Being able to do that I think will help people to follow their views. If they can keep active and participate in these events, the people will see them. They will be end results—the positive end results—and they will want to be part of that as well. I think those are important ways to keep the organization going. (11)

Sub-theme: **Community contributions**

Giving back to our communities is our main, main objective, always doing that. That was the Navajo way at one time. I don’t really see it any more. We’re so used to taking, taking, taking now. I guess because that’s what we see in the other world. (01)

Sub-theme: **Membership recruitment**

I think it’s important to use different kinds of media to attract more people who want to work in many different ways. There are members from outside, depending on their level of commitment. That way, you’re forced to work with everyone and come out with ideas. (12)

Minor theme: **Community outreach**

DBI, under the Administration for Native Americans grant, the focus is to do community outreach to the Chapter communities, working with families, organizations, shepherds, weavers, anybody who has interest in bringing back the Churro sheep and using the wool with a value added approach, not just to the sheep but the entire industry that allows families to work from their homes. (12)

A lot of Navajo people hardly see their grandmothers, and a lot of grandmothers stay home. Some of them, they can’t travel far across the reservation to the workshops. I think that not a lot of people can come out and participate in the DBI meetings. It should be in small group areas where they can go out into small Chapter meetings. (10)

Minor theme: **Ethical standards**

There was a little bit of negative participation of a couple of people, but these people are no longer affiliated. They wanted to make it just a family oriented type of organization. But I think it was good that Suzanne was there, because she said that’s not our mission. . . . We
want to keep it open for whoever is interested in it. It doesn’t matter what walk of life or who they are. We need their input and their participation. (01)

Sub-theme: **Conflict resolution**

I liked the way the different people in the program were able to talk about it and resolve the issue. Everyone had a chance to voice their opinions. After the opinions were voiced, they made efforts to select another person for the position. I think it was handled professionally, I think they turned a negative thing into something positive by coming together and resolving an issue together. (11)

Sub-theme: **Democratic decision making**

Things that require group decisions, we discuss and everybody had their input. Usually, that’s how we reach a decision: have everybody discuss and talk about it, put in ideas. Then we try to work it all out so it’s something that we can all do and support. (03)

Minor Theme: **Fund raising**

People fade away, but some have to stay. They [DBI] are going to have to offer more benefits for the members. If they keep writing grants, they can reach it. You have to have something that they want. (06)

Minor Theme: **Building capability of board members**

Sub-theme: **Organizational participation**

I’ve never belonged to an organization. So that is one thing I am learning is to be part of an organization—an organization that fits with my lifestyle as far as sheep is concerned—and to learn ways to work with the community. (09)

Sub-theme: **Self assurance**

I feel like I’m doing something that’s giving me a positive feeling about myself, that I know I’m doing something. . . . I just feel great about it. I’d like to continue being part of the organization. What I’d like to gain is to feel that I’ve done something to help people, to say, “Yeah, I was part of it.” (04)

Once you’ve experience being a board member or getting something to fruition like DBI, it opens you up to say, “Okay, where’s the next place I need to focus my energy? What do I do to better the Native community?” For me, that’s what it’s done for me. It really builds your self-esteem.” (14)
APPENDIX I: CODING GUIDE FOR THEMES
Coding Guide for Major Themes, Minor Themes, and Sub-themes

1. Cultural Identity
   1.1 Return of the Navajo-Churro breed
   1.2 Awareness
      1.2.1 Historical value
      1.2.2 Sacred value
      1.2.3 Ecological value
   1.3 Agro-pastoral heritage
      1.3.1 Livelihood
      1.3.2 Independence
   1.4 Traditional life learning
   1.5 Family cohesion
   1.6 Gender
   1.7 Language

2. Cultural Product
   2.1 Natural colors
   2.2 Fiber characteristics
      2.2.1 Wool processing
      2.2.2 Spinning
      2.2.3 Weaving
   2.3 Value-added wool and weaving
   2.4 Social interaction
      2.4.1 Family interaction

3. Educational Channels
   3.1 Convening for meetings/events
   3.2 New acquaintances
   3.3 Resource networks
   3.4 Education for board members
      3.4.1 Integrate methods
   3.5 Educational outreach to Navajo people
   3.6 Intergenerational communication
   3.7 Economic return
   3.8 Political activity
   3.9 Educational outreach to non-Navajo market

4. Organizational Sustainability
   4.1 Committed leadership
      4.1.1 Community contribution
      4.1.2 Membership recruitment
   4.2 Community outreach
   4.3 Ethical standards
      4.3.1 Conflict resolution
      4.3.2 Democratic decisions
   4.4 Fund raising
   4.5 Building board member capabilities
      4.5.1 Organizational participation
      4.5.2 Self-assurance
      4.5.3 Capabilities
APPENDIX J: BOARD MEMBER CAPABILITIES
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Summary of Board member responses to Question 11: Which skills do you use in your work with DBI? Did you already know this skill when you joined? Have you learned them through DBI? Other skills you have learned?
<table>
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<td>Yes Knew, learned more about speaking</td>
<td>Yes Knew (youth), teacher</td>
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<td>Yes Learned &amp; Applied to own business</td>
<td>Yes Knew</td>
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<td>No Knew from family</td>
<td>No Learnt</td>
<td>No Learnt</td>
<td>Learned importance of recording traditional information</td>
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<td>Yes Knew</td>
<td>Yes Knew</td>
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<td>Yes Knew</td>
<td>No Knew from family</td>
<td>Yes Knew from family</td>
<td>Yes Knew</td>
<td>Improved Navajo language speaking skills</td>
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<td>Yes Knew, learned more</td>
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<td>No Knew from own business</td>
<td>No Knew</td>
<td>Yes Knew, learned more</td>
<td>Yes Knew</td>
<td>No Knew from family</td>
<td>Yes Knew from family, learned more</td>
<td>Yes Knew</td>
<td>New learning from DBI – first organization she joined</td>
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<td>No</td>
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<td>Yes Knew from family</td>
<td>No Knew, learned more</td>
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<td>Yes Learned more with youth at SILC</td>
<td>No Knew from family</td>
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<td>Gained experience presenting at programs</td>
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<td>Learned people want to take good care of flocks</td>
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<td>Learned to relate to people better, re-learned matriarchal culture and leadership</td>
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APPENDIX K: NAVAJO-CHURRO SHEEP
Navajo-Churro sheep. From top: Ram with four horns, ram, and ewe. Author’s photos (2004).
APPENDIX L: NAVAJO SPINDLE SPINNING
Spinning workshop showing use of Navajo spindles. Author’s photo (2003).
APPENDIX M: NAVAJO NATION LANDSCAPE
Navajo Nation landscape. From top: Housing cluster near Window Rock, Arizona, and road near Chinle, Arizona, through high desert toward mountains. Author’s photos (2004).
APPENDIX N: SHEEP IS LIFE CELEBRATION
Sheep is Life Celebration, Tsaile, Arizona. From top: Livestock show, vendor tents, shade house. Author’s photos (2003).
APPENDIX O: PRE-CELEBRATION WORKSHOPS
Pre-celebration workshops. From top: Instructor, students, and visitors in a four harness weaving class, and an off loom weaving class. Author’s photos (2003).
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