

REGROWING THE PAST TO PRESERVE THE
FUTURE: CULTURAL HERITAGE PRESERVATION
THROUGH THE PAWNEE SEED PRESERVATION
PROJECT

By

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A Note on Capitalization

The author would like to make note that while in other citation styles used in academia and general publication, terms such as “indigenous” and “native” may be capitalized when they are not referring to a proper noun, they are listed in the lower case throughout this document. The author is aware that this matter is evolving but has chosen the later for this particular citation style.

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Abstract: Traditional foodways of indigenous peoples worldwide face the risk of loss in an increasingly interconnected and modernizing world. To prevent further loss of culture, reclaim food sovereignty, and improve community health, many indigenous groups are taking steps to protect these foodways. Currently, no academic literature focuses on the Pawnee Nation of Oklahoma's Pawnee Seed Preservation Project which has brought back 18 varieties of ancestral Pawnee corn since the project officially began in 1998 through collaborative efforts between both Pawnee in Oklahoma, and non-Pawnee growers in Nebraska. This paper examines the affect of the project on preserving Pawnee culture and traditions through semi-structured interviews conducted with five Pawnee Elders with ties to the project. The findings indicate a strong correlation between corn grown through the project continuing to help shape Pawnee identity, traditions, spirituality, ceremonial uses, and influence a younger generation to get involved in the growing process. Supplementary findings also show optimism towards health improvements related to the reintroduction of this corn into the diet of the tribe, possible business and scientific endeavors associated with growing the corn, as well as a strengthening of relationships with non-Pawnee growers who have been essential to the project's success.

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CHAPTER I

INTRODUCTION

Worldwide, there is daily loss of knowledge and customs that negatively impacts humanity.¹ Indigenous peoples, in particular, are vulnerable to the loss of traditional practices and cultural heritage in an increasingly globalized world. Declining birth rates, population decline, and social injustice, along with changing societal structure have led to a loss of native languages, traditional agricultural and food practices, and historic traditions. One area of concern is the loss of traditional foodways, which are considered to be a form of intangible cultural heritage². Traditional foods develop over time and become ingrained in the culture that produces them, typically requiring less agricultural input, yielding higher nutritional content, and thriving in the local environment.³ Intangible heritage itself is defined as culture tied to language, music, intellectual property rights, social practices, rituals, traditional craftsmanship, performing arts, and practices relating to the natural world and universe.

1. Federico Lenzerini, "Intangible Cultural Heritage: The Living Culture of Peoples," *European Journal of International Law* 22, no. 1 (2011): 102.

2. Raúl Matta, "Food Incursions into Global Heritage: Peruvian Cuisine's Slippery Road to Unesco," *Social Anthropology* 24, no. 3 (2016): 341.

3. P Maundu et al., "Safeguarding Intangible Cultural Heritage: A Practical Guide to Documenting Traditional Foodways: Using Lessons from the Isukha and Pokot Communities of Kenya," (UNESCO, 2013), 1; Matta, "Food Incursions into Global Heritage: Peruvian Cuisine's Slippery Road to Unesco," 341.

Intergovernmental organizations, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), were formed with part of their mission to preserve and protect cultural heritage worldwide. While there have been many charters and conventions by UNESCO to address the safeguarding of indigenous cultural heritage, traditions, and knowledge, those efforts are limited. Cultural heritage must be officially designated by UNESCO, and not all nations are member states of UNESCO. In 2003 the United States abstained from voting on the 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage that set guidelines and definitions for protecting cultural heritage.⁴ Contributing factors for abstaining were that cultural treaties are at odds with U.S. foreign policy, the U.S. lack of a Ministry of Culture, as well as the U.S. having a large non-profit cultural sector in the form of the Smithsonian Institution, the Library of Congress, and the National Endowment for the Arts to name a few.⁵ The 2003 Convention's primary mechanism to preserve intangible cultural heritage, inventory systems, has been criticized as being problematic since it requires member states to develop specialized bodies to carry out policy and identify intangible cultural heritage.⁶ While these inventory systems are good at helping to identify and protect cultural heritage, they may not be as accessible to many indigenous groups due to the nature of how these cultures view ownership from a collectivist perspective instead of an individual one, and also depend on the resources of their home country to develop a body to carry out policies that align with the Convention's requirements.

4. Richard Kurin, "Safeguarding Intangible Cultural Heritage in the 2003 Unesco Convention: A Critical Appraisal," *Museum international* 56, no. 1-2 (2004): 66.

5. Richard Kurin, "Us Consideration of the Intangible Cultural Heritage Convention," *Ethnologies* 36, no. 1-2 (2014): 336.

6. Erin K Slattery, "Preserving the United States' Intangible Cultural Heritage: An Evaluation of the 2003 Unesco Convention for the Safeguarding of the Intangible Cultural Heritage as a Means to Overcome the Problems Posed by Intellectual Property Law," *DePaul-LCA J. Art & Ent. L.* 16 (2005): 226-27.

To address this lack of protection and prevent further loss of traditional foodways and agricultural practices, many indigenous groups worldwide are taking steps to revitalize traditional growing methods, regrow historic crops and vegetables, preserve the traditions tied to these foodways, and improve the health and independence of their tribe through the practice of food sovereignty. Many indigenous groups are working to address these issues by taking an active role in promoting food sovereignty, the role traditional foods play in forming their cultural identities, and finding ways to protect this cultural heritage in systems where intellectual property rights often favor an individual over those of group. While many of these indigenous groups are not directly involved with or influenced by the UN and other intragovernmental organizations founded to protect cultural heritage, their efforts and programs do parallel and reflect many of the same goals.

Within the context of indigenous peoples in the United States, forced changes to the traditional ways of life for Native Americans greatly affected their spiritual, family, and food practices.⁷ Forced removal of tribes to reservations, along with forced assimilation into White culture, have affected the links between these groups and their traditional food sources.⁸ Efforts to protect intangible cultural heritage in the United States, where no formal system currently exists, are currently being undertaken by many indigenous groups within the country. Some notable examples within the United States are the Native Seeds/SEARCH, an organization that preserves seeds of the southwest U.S. and Mexico and provides them to native farmers in the region, as well as the White Earth Ojibwe's Land Recovery Project and the Gun Lake Tribe's

7: Rachel M Gurney et al., "Native American Food Security and Traditional Foods: A Review of the Literature," *Sociology Compass* 9, no. 8 (2015): 683.

8: Gurney et. al, 683-84.

Jijak Foundation.⁹ In the case of Native Seed/SEARCH, it began as a collaboration between the founders of the organization and the O'odham Nation to establish sustainable gardens for their food needs and use traditional seeds of the tribe in doing so.¹⁰ The Cherokee Nation of Oklahoma also has a seed bank that distributes up to two historic varieties of seeds (of the 24 varieties they have) to any Cherokee citizen.¹¹

One group working to restore their traditional foodways and cultural heritage is the Pawnee Nation of Oklahoma. Since 1998, through their Pawnee Seed Preservation Project (PSPP), the Pawnee Nation has embarked on a project to regrow historical corn and other seed varieties that were nearly lost to the tribe. This was not done as a response to a global movement, or inspired by another tribe's efforts to reclaim their own culture, but to address the question raised by Deb Echo-Hawk, Keeper of the Seeds, to the Pawnee Cultural Committee that the Pawnee, "...are the people of the corn and the buffalo, so where is the corn?"¹² Agriculture, and in particular corn, has always played a prominent role within Pawnee life. It was the only crop of the Pawnee to have religious connotations and a direct connection with the cosmos, and was also the basis for the entire Pawnee horticultural cycle.¹³ Despite this prominent role in the culture of

9: Christina Gish Hill, "Seeds as Ancestors, Seeds as Archives: Seed Sovereignty and the Politics of Repatriation to Native Peoples," *American Indian Culture and Research Journal* 41, no. 3 (2017): 94.

10: "Our Story," Native Seeds/SEARCH, accessed June 7, 2021, <https://www.nativeseeds.org/pages/history-mission>.

11: "How a Seed Bank Helps Preserve Culture through Traditional Foods," NPR, updated April 2, 2019, <https://www.npr.org/sections/thesalt/2019/04/02/704795157/how-a-seed-bank-helps-preserve-choerokee-culture-through-traditional-foods>; Danovich, "How a Seed Bank Helps Preserve Culture through Traditional Foods."

12: Deb Echo-Hawk (Pawnee, Keeper of the Seeds), in discussion with author, March 23, 2021.

13: Gene Weltfish, *The Lost Universe : Pawnee Life and Culture* (Lincoln: University of Nebraska Press, 1977), 122-23.

the tribe, the corn could not be grown as successfully in Indian Territory where the tribe removed to in 1875.

Background of the Study

The Pawnees are a Caddoan tribe whose historic territory extended from the Missouri River in present-day Iowa and incorporated included the present states of South Dakota, Wyoming, Colorado, and Kansas before influence from outside tribes and pandemics consolidated their lands to those in present-day Nebraska.¹⁴ They speak a Caddoan language, with two distinct dialects between the Skidis and the South Bands.¹⁵ Ceremonies play a very large role in Pawnee life, not only for religious purposes, but also as a means to keep cosmic order and the focus of Pawnee aesthetic life.¹⁶ Like many other Native American tribes, their traditional way of life was significantly altered due to their removal from ancestral lands, the boarding school system, and other outside influence that affected traditional Pawnee culture. This removal also affected the agricultural practices of the tribe, whose well-known and sacred corn failed to grow as well in the soil of their new reservation in Indian Territory.¹⁷

Currently, no scholarly literature exists that is focused on the PSPP and their efforts to preserve tribal culture through their regrowing of Pawnee ancestral corn and seeds. The outcomes

14: Joseph Reed, Pawnee THPO, personal communication, May 18, 2021.

15: Douglas R Parks, "Pawnee", ed. William C. Sturtevant, vol. 13, *The Handbook of North American Indians*, (Washington: Smithsonian Institution, 2001), 515.

16: Weltfish, *The Lost Universe*, 8.

17: Carla Hinton, "Sowing Sacred Seeds: How the Pawnee Nation Saved Ancestral Corn by Returning to Its Nebraska Home," *The Oklahoman*, November 22 2018, <https://oklahoman.com/article/5615743/sowing-sacred-seeds-how-the-pawnee-nation-saved-ancestral-corn-by-returning-it-to-its-nebraska-home> ; Parks, *Pawnee*, 13; Partners in the Pawnee Seed Preservation Project, "Protecting Sacred Seeds in a Pandemic, and into the Future," *Catholic Climate Covenant*, October 25 2020, <https://catholicclimatecovenant.org/news/protecting-sacred-seeds-pandemic-and-future>.

of this project and outlook for the future of the PSPP will be assessed through a brief history of the program and interviews conducted with Pawnee Elders with ties to the PSPP.

Purpose of this Study

The purpose of this study is to use grounded theory methodology to assess outcomes of regrowing ancestral corn as part of the Pawnee Seed Preservation Project (PSPP) on Pawnee food sovereignty, tribal culture and customs, and health by interviewing Pawnee Elders with ties to the PSPP.

Founded in 1997 by Deb Echo-Hawk, and officially beginning in 1998, the PSPP has been a great success for the tribe in bringing back ancestral corn varieties that were nearly lost to time. Working with selected growers primarily in Oklahoma and Nebraska the PSPP has been able to successfully regrow 18 varieties of Pawnee ancestral corn, as well as preserve other seeds historically grown by the tribe. Along with this repatriation of corn back to the tribe's ancestral lands in Nebraska, there has been a reintroduction of this corn into the Pawnee diet, as well as a growing interest in the role that corn has traditionally served within the tribe.

Significance of the Study

While research focused on cultural heritage preservation efforts by Native American tribes within the United States is not new or limited, few studies have looked specifically at the role regrowing ancestral seeds can have upon preserving and protecting this cultural heritage. The PSPP is unique in that corn is distributed to growers who meet certain requirements to do so, includes non-Pawnee growing partners in Nebraska, and that many of the varieties have been reclaimed through historic varieties reappearing in the corn being grown. Looking at the history and outcomes of the PSPP provides a current look at a tribe actively working on protecting and

reclaiming their cultural heritage in the United States. For the Pawnee, the outcomes of the interviews may provide initial insights into the future directions for the project and provide current perceptions from a group of key community stakeholders, Pawnee tribal Elders. It may also provide the Pawnee a chance to see how their efforts fit into the overall movement of indigenous groups around the world to reclaim culture through traditional regrowing of ancestral seeds.

Focusing on the success of the program and the outcomes of the Pawnee Seed Preservation Project can serve as a model to other tribes within the United States who may also be trying to reintroduce traditional foodways and customs back into their diets through the regrowing of ancestral seeds. Results from this study could provide further collaboration and shared practices between tribes within the United States who share similar goals of preserving their cultural heritage while improving the health and well-being of their members.

Limitations

Limitations for this study include it being limited to just Pawnee Tribal members with knowledge of the Pawnee Seed Preservation Project (PSPP). The current COVID-19 pandemic also affected the ability to interact with PSPP staff and associated Elders and prevented in-person visits to Pawnee and other locations where corn is being regrown, harvested, and processed as part of the project. For example, interview participants were identified by Pawnee Tribe member, Deb Echo-Hawk, Keeper of the Seeds for the Pawnee Seed Preservation Project (PSPP).

Participants were to be Pawnee Elders with extensive knowledge of the PSPP. Recruitment of these participants was limited to those identified as meeting these criteria. Due to these selection criteria and the nature of the PSPP being small in size, the sample size is also limited, and does not include input from other age demographics within the Pawnee Tribe who may or may not have ties to the PSPP and who may be able to provide additional insight into the

outcomes of the project. Views of the Elder participants may not be reflective of the larger population. Given the sample size, gender may have also played a role in the viewpoints expressed by participants. Limiting the participants to those Elders with an extensive knowledge of the PSPP may have introduced bias into the results.

CHAPTER II

LITERATURE REVIEW

This chapter reviews literature and research related to traditional foodways of indigenous groups globally and within the United States. Chapter Two comprises five sections, each section analyzes a global concept and then focuses on how that concept is approached by indigenous groups within the United States. Section one examines existing literature relating to food sovereignty among indigenous groups. The second examines the role food serves within a culture, both as a form of identity and as an expression of cultural beliefs. The third examines traditional foodways as intangible cultural heritage among indigenous groups and the efforts globally and locally to protect indigenous property rights. The final section summarizes the literature review and highlights the need for studies focusing on cultural heritage preservation efforts of the indigenous groups in the United States by focusing on the current efforts of the Pawnee Tribe of Oklahoma to reclaim cultural heritage through their Pawnee Seed Preservation Project (PSPP). A brief history of the Pawnee Tribe and the role of corn within tribal history and customs is included. Few studies have looked at the relationship of seed preservation by a tribal nation within the United States and how it can act as a catalyst for cultural preservation.

Food Sovereignty as a Global Movement

The term “food sovereignty” was first popularized by La Via Campesina, an international movement of peasant farmers, in 1996.¹ It was further defined in 2007 through the Declaration of Nyéléni at the Forum of Food Sovereignty in Selingue, Mali, as, “...the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agricultural systems”.² This is a response to nearly five centuries of colonization and modernization of agricultural practices through governments and large corporations worldwide that control vast areas of land and the food and resources within them.³ That system, described as “food regimes” by Harriet Freidmann and Phil McMichael in the 1980s, links food production changes to the changing capitalist system which is influenced by political and economic factors.⁴ It is under these “food regime” systems that the diets and traditional foodways of indigenous peoples have been adversely affected.

Modernization of agricultural practices on a large scale combined with efforts from governments around the world to strip indigenous groups of their land, culture, and rights have greatly affected the ability of indigenous groups to grow and consume foods that have traditionally played a large role in their health, customs, and religious ceremonies. Even though

1. Charlotte Coté, ““Indigenizing” Food Sovereignty. Revitalizing Indigenous Food Practices and Ecological Knowledges in Canada and the United States,” *Humanities* 5, no. 3 (2016): 57; Leonardo Figueroa-Helland, Cassidy Thomas, and Abigail Pérez Aguilera, “Decolonizing Food Systems: Food Sovereignty, Indigenous Revitalization, and Agroecology as Counter-Hegemonic Movements,” *Perspectives on Global Development and Technology* 17, no. 1-2 (2018): 178; Elizabeth Hoover, “You Can’t Say You’re Sovereign If You Can’t Feed Yourself: Defining and Enacting Food Sovereignty in American Indian Community Gardening,” *American Indian Culture and Research Journal* 41, no. 3 (2017): 32; Hannah Wittman, “Food Sovereignty: A New Rights Framework for Food and Nature?,” *Environment and Society* 2, no. 1 (2011): 87.

2. Hoover, “Defining and Enacting Food Sovereignty,” 32.

3. Coté, ““Indigenizing” Food Sovereignty,” 62; Figueroa-Helland, Thomas, and Aguilera, “Decolonizing Food Systems,” 180.

4. Wittman, “Food Sovereignty New Rights Framework,” 89.

these groups have better understandings of the ecosystems they cultivate and harvest than other groups with fewer ties to the land on which they farm, “indigenous ecological knowledges have been dismissed as “primitive” and “outdated”.”⁵

It has been the “indigenizing” of the food sovereignty movement that has brought about a focus on the important role that indigenous foods play in the culture and health of those groups that have traditionally grown and utilized them.⁶ Between 350 and 370 million indigenous people are living around the world.⁷ Food sovereignty has been a uniting mechanism for indigenous peoples globally who share a desire to practice food systems that reflect their cultural values.⁸ Women, who make up sixty percent of undernourished persons globally and produce most of the world’s food, are at the forefront of the movement.⁹ It has been a movement that allows for groups that have suffered so much due to colonization to reclaim a way of living and eating that benefits their health and revitalizes their culture. It is seen as a shift from neoliberal economic development and industrial agriculture.¹⁰ An example of this can be found within the Food Sovereignty movement among indigenous groups within the United States.

Food Sovereignty in the United States

Many tribes were forcibly resettled by the U.S. government through legislation such as the Indian Removal Act of 1830 to reservations where flora and fauna differed greatly from their

5: Figueroa-Helland, Thomas, and Aguilera, "Decolonizing Food Systems," 180.

6: Coté, ""Indigenizing" Food Sovereignty," 58.

7: Jeff Cornassel and Cheryl Bryce, "Practicing Sustainable Self-Determination: Indigenous Approaches to Cultural Restoration and Revitalization," *Brown J. World Aff.* 18 (2011): 151; Coté, ""Indigenizing" Food Sovereignty," 62.

8: Coté, ""Indigenizing" Food Sovereignty," 58.

9: Figueroa-Helland, Thomas, and Aguilera, "Decolonizing Food Systems," 176-79.

10: Hoover, "Defining and Enacting Food Sovereignty," 33.

homelands. Lack of access to plants and animals that had been cultivated and used for centuries was cut off, altering the diets of those tribes. In addition to forced removal, subsequent policies were deliberately enacted as a way to erase culture through boarding schools, disrupt traditional food systems and hunting practices, and stop traditional religious beliefs as a way to assimilate tribes and take over their land for white settlement.¹¹

As a result of this, health issues have become rampant within the Native American groups having higher rates of obesity, diabetes, and food insecurity compared to other ethnic groups within the country.¹² A primary cause for a decrease in population and increase in diseases is due to European influence on indigenous food systems.¹³ In the case of the Native American tribes within the state of Oklahoma, it has been due to poverty and dependency on the government that has resulted in a lack of nutritious food.¹⁴

A challenge in addressing issues related to food sovereignty initiatives among tribes in the United States is that tribal agency differs greatly depending on the available political, economic, and social resources.¹⁵ Nevertheless, many indigenous groups within the United States have created programs designed to address these issues with initiatives to regrow historic seeds, raise cattle and bison as food sources, as well as to develop community gardens as a source of

11: Coté, "Indigenizing" Food Sovereignty, 58; Hoover, "Defining and Enacting Food Sovereignty," 35; Devon Mihesuah, "Searching for Haknip Achukma (Good Health): Challenges to Food Sovereignty Initiatives in Oklahoma," *American Indian Culture and Research Journal* 41, no. 3 (2017): 11; Rachel V Vernon, "A Native Perspective: Food Is More Than Consumption," *Journal of Agriculture, Food Systems, and Community Development* 5, no. 4 (2015): 139.

12: Hoover, "Defining and Enacting Food Sovereignty," 36; Mihesuah, "Searching for Good Health," 11.

13: Gideon Mailer and Nicola Hale, *Epilogue.: Decolonising the Diet: Food Sovereignty and Biodiversity, Decolonizing the Diet: Nutrition, Immunity, and the Warning from Early America*, (Lond, UK: New York, NY, USA: Anthem Press, 2018), 175.

14: Mihesuah, "Searching for Good Health," 12.

15: Mihesuah, 9.

fresh fruits and vegetables. Organizations such as the First Nations Development Institute, the Intertribal Agricultural Council, and the Native American Food Sovereignty Alliance are some organizations that have been formed to help address these issues.¹⁶

What is known as “decolonizing the diet” has become a term used by Native American groups to call attention to negative changes in their dietary habits due to European contact.¹⁷ The right to self-determination and subsistence living remains very important to indigenous groups. Mailer and Hale state, “For indigenous peoples, subsistence living involves everyday cultural, spiritual, and social interactions grounded in reciprocal relationships that sustain communities for generations.”¹⁸ It is not only the food itself that is important to indigenous groups, but also the community interactions and bonds that are formed through the process of growing, harvesting, and consuming food as a group.

Food’s Role in Cultural Identity

According to Trichopolou et al., traditional foods reflect cultural inheritance and also function as expressions of history and lifestyle.¹⁹ Traditional foods have been passed down through generations and have affected the dietary patterns of the groups that have consumed these foods over time.²⁰ The foods consumed by a group helps form its identity, diversity, hierarchy, and organization while also showing that group’s differences to others who don’t eat the same.²¹

16: Hoover, "Defining and Enacting Food Sovereignty," 40.

17: Mailer and Hale, *Decolonising the Diet*, 190.

18: Mailer and Hale, 154.

19: Antonia Trichopoulou, Stavroula Soukara, and Effie Vasilopoulou, "Traditional Foods: A Science and Society Perspective," *Trends in Food Science & Technology* 18, no. 8 (2007): 420.

20: Trichopoulou et al., 420.

21: Claude Fischler, "Food, Self and Identity," *Social science information* 27, no. 2 (1988): 275.

Wahlqvist and Lee argue that food culture develops out of a group's place of origin and is further shaped by multiple factors such as natural resources, belief systems, ethnicity, agricultural and hunting methods, as well as by colonization.²² This is a belief shared by Weaver who also argues that all localized foods evolve over time from external factors and that the relationship between food and place is complex due to this.²³ An example of this can be seen in the introduction of red peppers into the Korean diet in the 1600s when they arrived through trade. Peppers were then incorporated into dishes, like kimchi, that had been around for over a thousand years without spice and has since become a staple ingredient in many varieties of kimchi and dozens of other food products.

Geography plays a large role in the development of cuisines and diets that become associated with specific groups. Examples of these would be the Mediterranean Diet and its association with the people of Sardinia; kimchi's role in the culture and diet of the people of the Korean Peninsula; as well as the association of foods such as haggis with Scotland. A cuisine is the outcome of raw materials being transformed into something edible through a variety of processes that may have religious ties or taboos associated with it and which provides a snapshot of the culture it is connected with.²⁴ The cultural significance of food is a mixture of social values, meanings, and beliefs, and not just a process of eating for nutrition.²⁵

While foods remain associated with the groups that develop and created them, globalization has also influenced the types of food available around the world. For example, the

22. Mark L Wahlqvist and Meei-Shyuan Lee, "Regional Food Culture and Development," *Asia Pacific journal of clinical nutrition* 16 (2007): 2.

23. William Woys Weaver, "Food and Place," in *Food Culture: Anthropology, Linguistics and Food Studies*, ed. Janet Chrzan and John Brett (New York: Berghahn Books, 2017), 218.

24. Fischler, "Food, Self and Identity," 284-85.

25. Anne Murcott, "The Cultural Significance of Food and Eating," *Proceedings of the Nutrition Society* 41, no. 2 (1982): 203.

incorporation of certain foods such as fatty pork into the Okinawan diet via trade with China and through the diffusion of Japanese, Thai, Chinese, French, Italian, Mexican, and numerous other cultures cuisines well outside of their location of origin.²⁶ Or the diffusion of foods between the Old and New Worlds in what is known as the “Columbian Exchange”. This exchange of goods saw Old World crops such as corn, potatoes, and tomatoes, among others, shipped to the New World who in turn introduced things such as wheat, sugar, livestock, and disease to the Old World.²⁷ Cook and Crang argue that regional cuisines are invented traditions and that many foods associated with a country came about via outside connections.²⁸ In the context of indigenous groups within the United States, contact with Europeans and other settlers eventually resulted in the forced relocation to new lands, loss of traditional hunting and agricultural practices, and eventually the incorporation of foods that adversely affected the health of these groups.

Food’s Role in Native American Culture

The migration of indigenous peoples to the New World is believed to have occurred around 15,000 years ago, but this number continues to go further back in time as new information is uncovered through research.²⁹ A varying landscape meant that the diets of the tribes that settled in a given area were greatly dependent on the flora and fauna available in that locality. Plants that were safe to eat were incorporated into the diet, and eventually, hybridization occurred through farming methods which helped develop staple crops. Hunting and fishing provided necessary

26: Wahlqvist and Lee, "Regional Food Culture and Development," 4.

27: Thomas Grennes, "The Columbian Exchange and the Reversal of Fortune," *Cato J.* 27, no. 1 (2007): 92.

28: Ian Cook and Philip Crang, "The World on a Plate: Culinary Culture, Displacement and Geographical Knowledges," *Journal of material culture* 1, no. 2 (1996): 139.

29: Sunmin Park, Nobuko Hongu, and James W Daily III, "Native American Foods: History, Culture, and Influence on Modern Diets," *Journal of Ethnic Foods* 3, no. 3 (2016): 171.; Joseph Reed, Pawnee, personal communication.

sustenance for numerous tribes, with locality influencing what was caught and consumed. Park et al. state that well-organized trade routes and increased communication between tribes resulted in the spread of foods from region to region.³⁰ European settlers greatly benefited from the knowledge they gained on local foods from Native American tribes. Native crops and foods had a great effect on the diet of European settlers in the New World, especially in the American South.³¹ Old World staples, combined with those from Africa and the Caribbean, also greatly influenced the diet of Native Americans who were introduced to cattle, pigs, peppers, dairy products, sugar, and many other crops, vegetables, and fruits.³²

A common set of foods grown by numerous tribes was corn, squash, and beans, which are known collectively as the “three sisters”.³³ Corn (maize) was the main staple crop for numerous tribes, and it was mixed with other foods and also baked into various types of bread.³⁴ It most likely originated in west-central Mexico over 7,000 years ago and slowly spread from there to the Southwest U.S. before diffusing to other regions of the North America.³⁵ The earliest recovered remains of corn in the central Plains have been dated to around 780 A.D.³⁶ In addition to its role as a food source, corn had a sacred role for many of the tribes who grew it and who

30. Park, Hongu, and Daily III, "Native American Food's Influence," 172.

31. Rayna Green, "Mother Corn and the Dixie Pig: Native Food in the Native South," *Southern Cultures* 14, no. 4 (2008): 118-22; Park, Hongu, and Daily III, "Native American Food's Influence," 176.

32. Green, "Mother Corn and Dixie Pig," 118; Grennes, "The Columbian Exchange and the Reversal of Fortune," 92.

33. Park, Hongu, and Daily III, 174.

34. Green, "Mother Corn and Dixie Pig," 117; Park, Hongu, and Daily III, "Native American Food's Influence," 174.

35. Mary J. Adair, "Archaeological Maize in the Central Plains," *Current Archaeology in Kansas* 9 (2012): 75-76.

36. Adair, "Archaeological Maize," 78.

often considered it to be the mother of the tribe.³⁷ Many ceremonies, stories, and rites have ties to corn among numerous tribes within the United States.

The collecting of food was a community effort within the tribe with each gender having a role. Women, particularly in the case of the tribes of the Upper Missouri River, were responsible for the growing of crops.³⁸ Rachel Vernon argues that even today among native groups, food invokes community, interconnectedness, and well-being.³⁹ Food is a way to bring together members of the tribe and community to share in traditions and teach the importance of those foods and associated ceremonies within the tribe. As discussed within food sovereignty, many Native American tribes are still facing health issues related to the change in diet over time due to government policies that forcibly moved them out of their homelands and traditional food sources, as well as creating poverty and dependency on government-issued foods via the Food Distribution program that provides highly processed foods to low-income and elderly Native American families.⁴⁰

Intangible Cultural Heritage of Indigenous Peoples

Worldwide indigenous peoples face the challenge of protecting their cultural heritage and intellectual property rights. According to Grey and Kuokkanen, a key problem is that the concept of cultural heritage commonly used is "...incompatible with- and in fact hostile to- indigenous peoples' social and political thought."⁴¹ Intellectual property laws have been used as a tool of

37: George F. Will and George E. Hyde, *Corn among the Indians of the Upper Missouri* (Lincoln and London: Univeristy of Nebraska Press, 1917), 198.

38: Will and Hyde, *Corn among the Indians*, 74.

39: Vernon, "A Native Perspective," 139.

40: Vernon, 139-140.

41: Sam Grey and Rauna Kuokkanen, "Indigenous Governance of Cultural Heritage: Searching for Alternatives to Co-Management," *International Journal of Heritage Studies* 26, no. 10 (2020): 920.

colonization.⁴² Grey and Kuokkanen argue that international approaches to establishing indigenous self-determination, such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the UNESCO Convention Concerning the Protection of World Cultural and Natural Heritage, known as the *World Heritage Convention*, act as barriers to doing so by taking control away from the group and just allowing for co-management and co-participation in the process.⁴³ The self-determination of indigenous groups is hindered by the policies supposedly established to help protect their cultural.⁴⁴

Food heritage falls under the category of intangible cultural heritage (ICH), which was defined by the UNESCO *Convention on Intangible Cultural Heritage* (2003) as, “practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith- that communities, groups, and in some cases, individuals recognize as part of their cultural heritage.”⁴⁵ Traditional foodways entail knowledge, practices, beliefs, and cultural aspects related to a group, and are further influenced by taboos, the community, and the natural environment.⁴⁶ Traditional foodways are disappearing at a high rate due to modernization, and this has in turn adversely affected the health and diet of those groups whose foodways are changing.⁴⁷

42. Jessica Myers Moran, "Legal Means for Protecting the Intangible Cultural Heritage of Indigenous People in a Post-Colonial World," *Holy Cross JL & Pub. Pol'y* 12 (2008): 71.

43. Grey and Kuokkanen, "Indigenous Governance of Cultural Heritage," 920.

44. Grey and Kuokkanen, 925.

45. UNESCO, "The Unesco Convention for the Safeguarding of the Intangible Cultural Heritage."

46. Maundu et al., "Safeguarding Intangible Cultural Heritage," 1.

47. Maundu et al., 1-2.

Reluctance to share traditional knowledge and secrets with outsiders is another challenge that indigenous groups must navigate.⁴⁸ While the World Intellectual Property Organization (WIPO), Convention on Biological Diversity (CBD), and Agreement on Trade-Related Aspects of Intellectual Property (TRIPS) all have policies that require member states to protect and help preserve indigenous practices and traditional knowledge, keepers of traditional knowledge may be reluctant to give away too much control to these organizations and share knowledge that is traditionally kept within the group.⁴⁹ There is even concern that the TRIPS, with a focus on industrial interests, should have less of a role in negotiating rights for indigenous groups.⁵⁰ In the United States, protection of indigenous cultural and property rights can be difficult due to the inherent nature of the U.S. system which favors the individual over the group.

Intellectual Property Rights in the United States

Protection of intellectual property rights of Native American tribes is challenging. The U.S. system of protecting these rights is accomplished through the use of copyrights, patents, and trademarks. According to Richard Guest, this system favors individuals and companies and fails to protect Native American intellectual property.⁵¹ The use of copyrights, wherein an individual can receive protection of their work through legal means, disadvantages Native American groups

48. Rosemary J Coombe, *First Nations' Intangible Cultural Heritage Concerns: Prospects for Protection of Traditional Knowledge and Traditional Cultural Expressions in International Law*, ed. Catherine Bell and Robert Patterson, *Protection of First Nations' Cultural Heritage: Laws, Policy and Reform*, (Vancouver: University of British Columbia Press, 2009), 255; Moran, "Legal Means for Protecting Intangible Cultural Heritage," 74.

49. Coombe, *First Nation's Intangible Heritage*, 249.

50. Coombe, 254.

51. Richard A Guest, "Intellectual Property Rights and Native American Tribes," *American Indian Law Review* 20, no. 1 (1995): 114.

whose work comes from the community and over generations in lieu of through one individual.⁵² The very concept of intellectual property rights goes against the view that it belongs to the indigenous community.⁵³ Trademark protects words, symbols, and images. In the context of Native Americans, there have been numerous tribes who successfully trademarked products or goods, but there are also tribal symbols that have been used by groups outside of a tribe for profit.⁵⁴ Patents are also problematic since they protect for a specified period of time before going into the public domain, and they cannot be registered to multiple people.⁵⁵

Further complications arise in the protection of seeds that are historically significant to Native American tribes. In the case of seed banks, such as the Svalbard Global Seed Vault in Norway, many indigenous groups may be reluctant to send seeds to an outside organization due to past instances of betrayal by governments.⁵⁶ Within the United States, this is especially true. Many tribes would prefer to keep complete control of these seeds within the tribe. These seeds have been cultivated over generations to adapt to certain growing methods and locations, as well as provide health benefits to those who consume the final product.⁵⁷ Michael Ward believes that in the case of many Native American tribes: "...ceremonies, symbols, songs and sacred narratives

52.: David B Jordan, "Square Pegs and Round Holes: Domestic Intellectual Property Law and Native American Economic and Cultural Policy: Can It Fit?," *American Indian Law Review* 25, no. 1 (2000): 99.

53.: Moran, "Legal Means for Protecting Intangible Cultural Heritage," 77.

54.: Moran, 79.

55.: Moran, 78-79.

56.: Sheryl D Breen, "Saving Seeds: The Svalbard Global Seed Vault, Native American Seed-Savers, and Problems of Property," *Journal of Agriculture, Food Systems, and Community Development* 5, no. 2 (2015): 44.

57.: Letitia M McCune, "The Protection of Indigenous Peoples' Seed Rights During Ethnobotanical Research," *Ethnobiology Letters* 9, no. 1 (2018): 72.

belong exclusively to the people and cultures from whence they came.”⁵⁸ With each tribe having different beliefs, symbols, traditional crops, and ceremonies, protecting intellectual property rights is a challenge.

The History of the Pawnee Tribe

The Pawnees are a Caddoan tribe whose origin stories place the first Pawnee woman to a site near Palmer in present-day Nebraska.⁵⁹ Archaeological dating on earthlodges and the use of sacred bundles dates this to around 1600-1800 years ago.⁶⁰ They were a semi-sedentary tribe as they left their villages seasonally to hunt bison and other game and capture horses before returning to harvest and store crops that had been planted. The Pawnee origin story places the tribe in the Great Plains where they were most likely united with the Wichitas as one tribe around 2,000 years ago.⁶¹ Until around 1600, the Arikara were still part of the group and not considered a separate tribe from the Pawnees.⁶² Migration stories among the Pawnee most likely refer to “individual bands of the tribe or the coalescing of smaller populations into a larger and larger Pawnee ethnic group”.⁶³

Four bands made up the Pawnee tribe, the Ckîri (Skidis) who had a unique dialect and settled in Nebraska earliest, the Chaui (Chawis), the Kitkehakis, and the Pîtahâwirata

58: Michael Kent Ward, "Teaching Indigenous American Culture and History: Perpetuating Knowledge or Furthering Intellectual Colonization," *Journal of Social Sciences* 7, no. 2 (2011): 109.

59: Joseph Reed, Pawnee THPO, personal communication, May 18, 2021.

60: Joseph Reed, Pawnee THPO, personal communication.

61: Joseph Reed, Pawnee THPO, personal communication.

62: Joseph Reed, Pawnee THPO, personal communication.

63: Joseph Reed, Pawnee THPO, personal communication.

(Pitahauerats).⁶⁴ Kinbacher supports Hyde's statement that the Pawnee settled into Nebraska from the south, with the Skidi having no references to living elsewhere, while the other three bands were aware of this past migration.⁶⁵ This migration likely refers to the "coalescing of bands into a core area" as they moved northward.⁶⁶ These groups, although divided into separate villages, were able to maintain continuous interaction through a common language and shared cultural practices. Another group, the Arikara, were also considered to be related to the Pawnee, but "whose tradition was that they left the Skidis in Nebraska and moved up the Missouri and into Dakota".⁶⁷ Due to the Arikaras collectively referring to the Pawnees as Skidis, anthropologists have mistakenly attributed information to that particular band when it should refer to the Pawnees as a collective tribe.⁶⁸

Archaeological and historical records show evidence of early 19th century villages having populations of over 2,000 people living in them at one time.⁶⁹ These large earthlodges held multiple families and included sleeping areas, storage platforms, a fireplace, and an altar located on the west side upon which rested a buffalo skull and the sacred bundle that contained corn and other objects.⁷⁰ Lodge size could range from smaller than 23 feet in diameter up to 60 feet, but

64.: George E. Hyde, *The Pawnee Indians* (Norman: University of Oklahoma Press, 1951), 12; Parks, *Pawnee*, 13, 515; David J Wishart, "The Dispossession of the Pawnee," *Annals of the Association of American Geographers* 69, no. 3 (1979): 382.; Joseph Reed, Pawnee THPO, personal communication.

65.: Kurt E Kinbacher, "Indians and Empires: Cultural Change among the Omaha and Pawnee, from Contact to 1808," *Great Plains Quarterly* 32, no. 3 (2012): 211.

66.: Joseph Reed, Pawnee THPO, personal communication.

67.: Hyde, *The Pawnee Indians*, 52.

68.: Joseph Reed, Pawnee THPO, personal communication.

69.: Joseph Reed, Pawnee THPO, personal communication.

70.: Weltfish, *The Lost Universe*, 63-63.

usually averaged 35 feet diameter and housed up to 30 people of an extended.⁷¹ They also utilized two other types of structures for lodging when on their annual hunts, a “side dwelling” consisted of bent saplings covered in hide, and tipis.⁷² These types of structures predate Pawnee earthlodges.⁷³ Historically, the office of the chief was passed from father to son while the identity of the Band one belonged to was determined matrilineally.⁷⁴ Band identity and the office of chief are still determined this way today if circumstances allow for it.⁷⁵

Sacred bundles serve an important role in Pawnee culture, with some having ties to the stars.⁷⁶ Historically, the sacred bundles played a key role in the political structure and ceremonies of the tribe.⁷⁷ They were passed through the women in the family from mother to eldest daughter.⁷⁸ They were used as a way for the Pawnee to maintain the balance of nature and communicate with the gods.⁷⁹ This reference to the celestial being and stars as “gods” in the Greco-Roman sense is actually incorrect, as they are different, and “there is only one Creator, Tiarawahut”.⁸⁰ A perfect ear of the “Mother Corn” was then used in the bundle to revitalize and replenish the seeds that were used throughout the year to plant crops.⁸¹ This Mother Corn is “used

71.: Parks, *Pawnee*, 13, 523.; Joseph Reed, Pawnee THPO, personal communication.

72.: Parks, *Pawnee*, 13, 525.

73.: Joseph Reed, Pawnee THPO, personal communication.

74.: Joseph Reed, Pawnee THPO, personal communication.

75.: Joseph Reed, Pawnee THPO, personal communication.

76.: Joseph Reed, Pawnee THPO, personal communication.

77.: Parks, *Pawnee*, 13, 531.

78.: Joseph Reed, Pawnee THPO, personal communication.

79.: "The Pawnee Reclaim Their Sacred Corn and Sacred History," Prairie Citizen, updated March 18, 2018, <https://prairiecitizen.com/culture/pawnee-reclaim-their-sacred-corn-and-sacred-history/>.

80.: Joseph Reed, Pawnee THPO, personal communication, May 20, 2021.

81.: Bucco, "Pawnee Reclaim Their Sacred Corn."

to plant crops used only in religious matters”.⁸² Great care was taken to maintain and protect the bundles from danger.

Corn has a sacred role within Pawnee culture, and its role is woven into all rites, rituals, and spiritual beliefs of the tribe. According to Will and Hyde, in regard to the tribes of the Upper Missouri region, the Pawnee “...are said to have the largest volume of ceremonial observances, connected with the corn and its cultivation, of any tribe in the area.”⁸³ According to the Pawnee religion, the Creator was Tirawa who created the universe and all beings in it.⁸⁴ It is within the creation story that Evening Star is made to stand in the west and eventually marries Great Star who stands in the east, and from their union comes a girl who marries the son of the Sun and Moon.⁸⁵ Evening Star touched the earth at the top of Pike’s Peak and there gave a Chaui man the first corn seeds before showing him a cave from whence buffalo emerged to populate the earth.⁸⁶ This Chaui man brought these things back to the Pawnees and he included the corn seeds in a sacred bundle he made.⁸⁷ Bright Star serves as the medium between the Pawnee and Tirawa, and she is represented on earth by the Mother Corn, a sacred variety of white corn within the tribe.⁸⁸

Ceremonies were cyclical and tied to the cosmos. The planting began with the *Awari* or “Ground-breaking ceremony” that consisted of three parts in which the women took a prominent

82: Joseph Reed, Pawnee THPO, personal communication.

83: Will and Hyde, *Corn among the Indians*, 199.

84: Douglas R Parks and Waldo R Wedel, "Pawnee Geography: Historical and Sacred," *Great Plains Quarterly* (1985): 152; Will and Hyde, *Corn among the Indians*, 200.

85: Will and Hyde, *Corn among the Indians*, 202-3.

86: Joseph Reed, Pawnee THPO, personal communication.

87: Joseph Reed, Pawnee THPO, personal communication.

88: Will and Hyde, *Corn among the Indians*, 203.

role.⁸⁹ The first celebrated the original coming together of the villages, the second mimed hoeing the ground for the harvest and included dancing and eight songs, and the third was a feast served to all in the tribe.⁹⁰ The harvest of corn took place in two phases, one in late August or early September, and the other taking place in mid-October.⁹¹ The Pawnees were able to determine the maturity level of their corn while on the hunt by examining milkweed seed pod maturity and knowing it was time to return to their homes.⁹²

Gender roles were well defined with men taking the roles of hunters, priests, warriors, and healers, while the women were solely responsible for the horticulture, processing meat and hides, and producing tents and other goods.⁹³ Women had the role of planting corn and other crops within the tribe, typically on land that was around one acre in size, in fertile soil near creeks or streams.⁹⁴ According to Reed's estimates based off crop yield studies of other tribes, the average diet of corn for one person required around 7.6 acres of land to yield the proper amount.⁹⁵ Corn was planted in large fields with care being taken to space varieties far enough apart to avoid cross-pollination.⁹⁶ Numerous varieties of corn were grown by the tribe broken into four subspecies; flint, flour, sweet corn, and popcorn, with numbers ranging from 10 varieties by the

89: Weltfish, *The Lost Universe*, 95.

90: Weltfish, 95-102.

91: Parks, *Pawnee*, 13, 526; Will and Hyde, *Corn among the Indians*, 124.

92: Will and Hyde, *Corn among the Indians*, 115.; Joseph Reed, Pawnee THPO, personal communication

93: Kinbacher, "Indians and Empires," 211.

94: Parks, *Pawnee*, 13, 525; Will and Hyde, *Corn among the Indians*, 84-87.

95: Joseph Reed, Pawnee THPO, personal communication.

96: Deb Echo-Hawk and Ronnie O'Brien, "Saving the Pawnee Mother Corn," *Prairie Fire- The Progressive Voice of the Great Plains*, September 2011, <http://prairiefirenewspaper.com/2011/09/saving-the-pawnee-mother-corn>.

19th century, possibly 9 of these being pure strains, and up to possibly 15 total varieties earlier in the tribe's history.⁹⁷ Of the 10 varieties that Parks mentions, two were flint corn (one yellow and varied), five to six were flour corn (blue, speckled, white, yellow, and red), one sweet yellow corn, and one white flour corn which was their "holy corn" to be used only in sacred bundles.⁹⁸ Will and Hyde assert that the Pawnee had four sacred varieties, the pure white "Mother Corn" as well as black, yellow, and red varieties that were associated with various stars in their cosmology.⁹⁹ According to Echo-Hawk and O'Brien, the Pawnee grew non-hybrid varieties that were pure in color.¹⁰⁰

After the corn was harvested and dried, it was stored in caches in the ground.¹⁰¹ It was not uncommon for these caches to be raided by hostile tribes while the Pawnees were away on their annual hunts. Will and Hyde state that the Omaha and Otoe tribes raided the Pawnee caches most often.¹⁰² The Pawnee were said to select the seed ears with great care and at times kept a two-year supply of seed on hand.¹⁰³ Corn was consumed in almost every meal the Pawnee prepared.¹⁰⁴

Compared to other indigenous peoples in the eastern part of the United States, the Pawnee were relatively isolated from European contact due to their location in the middle of the

97. Parks, *Pawnee*, 13, 525; Weltfish, *The Lost Universe*, 120-22; Will and Hyde, *Corn among the Indians*, 306-8.

98. Parks, *Pawnee*, 13, 525.

99. Will and Hyde, *Corn among the Indians*, 201.

100. Echo-Hawk and O'Brien, "Saving the Pawnee Mother Corn."

101. Parks, *Pawnee*, 13, 526; Will and Hyde, *Corn among the Indians*, 134-35.

102. Will and Hyde, *Corn among the Indians*, 114.

103. Will and Hyde, 290.

104. Echo-Hawk and O'Brien, "Saving the Pawnee Mother Corn."

continent¹⁰⁵, but there is some evidence to suggest encounters with the Spanish as early as the late-16th century.¹⁰⁶ Oral history of the Pawnees corroborates this early timeline, but places it a bit earlier in the mid-16th century with oral traditions speaking of fights with the Spanish who must have been part of Coronado's expedition.¹⁰⁷ Weltfish asserts that it was only in the 1830s that outside pressure began to be felt by the Pawnee.¹⁰⁸ Some of the earliest adoptions of the Pawnee tribe were the use of European weapons that they acquired through purchase and trade, as well as the use of horses, with their herds numbering up to 8,000 in the early 1800s.¹⁰⁹ Reed's office has worked with archaeologist to carbon date and analyze the DNA of horse bones found at a Pawnee historical site that puts one sample of a horse born in central Kansas in the mid-17th century.¹¹⁰ It was inclusion of the horse in Pawnee culture that allowed them to reimagine their status on the plains by giving them greater ability to hunt further distances and haul more of their goods.¹¹¹ Tipi size increased in diameter and material culture also grew with the introduction of horses into Pawnee culture.¹¹²

During the mid-1700s, the Pawnee started trading their pelts to European powers in exchange for guns and other goods, with sites after 1750 showing a marked difference in the material culture the tribe left behind.¹¹³ In 1818, the four bands of Pawnee had each signed

105. Kinbacher, "Indians and Empires," 215.

106. Hyde, *The Pawnee Indians*, 14.

107. Joseph Reed, Pawnee THPO, personal communication.

108. Weltfish, *The Lost Universe*, 3.

109. Kinbacher, "Indians and Empires," 216.

110. Joseph Reed, Pawnee THPO, personal communication.

111. Kinbacher, "Indians and Empires," 216.

112. Joseph Reed, Pawnee THPO, personal communication.

113. Kinbacher, "Indians and Empires," 217.

treaties with the U.S. government to establish formal relations as individual groups. Another treaty in 1825 meant to regulate trade with Whites treated the four distinct bands as one tribe.¹¹⁴ From the early 1830s on, the tribe suffered greatly from various misfortunes related to westward expansion, loss of traditional lands through unfair treaties, the introduction of diseases, and near-constant attacks by the Sioux and other tribes. In 1833, the tribe signed a treaty giving up lands south of the Platte River in promise for annuity payments should they give up their roaming lifestyle and warfare and settle on land to farm.¹¹⁵ Because of smallpox outbreaks throughout the first half of the 19th century, the Pawnee population decreased from nearly 10,000 to around 4,000 by 1855.¹¹⁶ Weltfish states that the number of Pawnee in the 1830s had been closer to 12,000.¹¹⁷ There are other estimates that put the population during that time at closer to 30,000 and possibly up to 100,000 based off of records of early French explorers, with some estimates even putting the total population near 300,000 pre-European contact.¹¹⁸ The four bands of Pawnee had been moved onto a reservation in 1859 that had been established by a treaty in 1857 at Table Rock, Nebraska, with the Chawis, Pitahauerat, and Kitkehakis settling together in one large village and the Skidi settling in two separate villages a short distance apart.¹¹⁹ By the 1860s they had merged into a single village for the whole tribe as a protection against the Sioux.¹²⁰

Missionary efforts, first begun in 1834 as a way to assimilate the tribe, continued up into the 1860s to little effect and with adverse effects on the tribe who were constantly harassed and

114. Kappler 1904-1941 as cited by Parks, *Pawnee*, 13, 519.

115. Hyde, *The Pawnee Indians*, 189-90; Parks, *Pawnee*, 13, 520.

116. Wishart, "The Dispossession of the Pawnee," 387.

117. Weltfish, *The Lost Universe*, 3.

118. Joseph Reed, Pawnee THPO, personal communication, May 25, 2021.

119. Wishart, "The Dispossession of the Pawnee," 393.

120. Joseph Reed, Pawnee THPO, personal communication.

killed by raiding Sioux at their permanent villages near the mission.¹²¹ According to Weltfish, large bands of Siouan refugees, numbering around 30,000 in total, continuously attacked and harassed the Pawnee to gain territory and access to hunting grounds.¹²² Many Pawnee warriors would go on to serve as scouts for the U.S. Army. Their efforts around 1864 helped ensure the safety of those building the Union Pacific Railroad from the Sioux, Cheyenne, and Arapaho,¹²³ while the last Pawnee enlistment in 1876 was a response to the defeat of General George Custer.¹²⁴

Pawnee removal to Indian Territory began in January 1873 when a group of 45 Pawnees led by Lone Chief, Frank White, and Big Spotted Horse, prompted by loss of bison hunting grounds, the Sioux Wars, and the appearance of American settlers, decided to move south to live among the Wichita tribe to gauge what removal for the Pawnee would be like.¹²⁵ Along the way, the group visited the Kiowa and other communities to hear their thoughts on possible Pawnee removal, and lay the foundation for it, while on their way south.¹²⁶ The group returned to Nebraska later that year to try and convince the tribe to move south, but they were denounced by the Risaru, led by Pitalesharo, who wished for the tribe to remain in their homelands.¹²⁷ A group, led by the three, decided to return south despite these protests, but were stopped en route by U.S.

121. Hyde, *The Pawnee Indians*, 191-201; Parks, *Pawnee*, 13, 520.

122. Weltfish, *The Lost Universe*, 3.

123. Parks, *Pawnee*, 13, 521.

124. Joseph Reed, Pawnee THPO, personal communication.

125. Roger Echo-Hawk, "2020 11 06 Roger Pawnee Removal Part 01 Lecture," ed. ECHOHAWK FAMILY (YouTube, November 19 2020). <https://www.youtube.com/watch?v=CM5DPoSkcc0>.

126. Roger Echo-Hawk, "Pawnee Removal Lecture".

127. Roger Echo-Hawk, "Pawnee Removal Lecture".

Agency officials who had intervened at the request of the leaders of the Pawnee Confederation.¹²⁸ Despite assurance that they would return, 485 Pawnees, relatives of Lone Chief, Frank White, and Big Spotted Horse, secretly slipped away south while sending the rest of the group back to Nebraska.¹²⁹

The Skidi in Nebraska remained adamant in their refusal to remove, while the South Bands were divided on what the tribe should do.¹³⁰ In 1874, lack of buffalo and loss of crops by a grasshopper invasion convinced the religious leaders that it must be judgement from Tirawa for their actions.¹³¹ The events at “Massacre Canyon” in which the Sioux ruthlessly murdered over a hundred Pawnee was also a major factor in this decision to move south.¹³² This prompted a large number of Pawnees to relocate to Indian Territory in 1874 after officially requesting the government to allow them to do so, while the Skidi waited until the fall of 1875 to relocate.¹³³ A great many tribal members were lost due the hardship and change in environment from their homeland.¹³⁴ The choice to remove to Indian Territory was one of empowerment and of agency for the Pawnee who wished to determine their own lives and believed that it would help the Pawnee survive.¹³⁵

128. Roger Echo-Hawk, “Pawnee Removal Lecture”.

129. Roger Echo-Hawk, “Pawnee Removal Lecture”.

130. Roger Echo-Hawk, “Pawnee Removal Lecture”.

131. Roger Echo-Hawk, “Pawnee Removal Lecture”.

132. Roger Echo-Hawk, “Pawnee Removal Lecture”; Joseph Reed, Pawnee THPO, personal communication.

133. Roger Echo-Hawk, “Pawnee Removal Lecture”.

134. Hyde, *The Pawnee Indians*, 317; Parks, *Pawnee*, 13, 523; Wishart, "The Dispossession of the Pawnee," 401.

135. Roger Echo-Hawk, “Pawnee Removal Lecture”.

While great care was taken by the Pawnee to keep corn varieties pure and retain their sacred corn varieties in use, the 1874 relocation of the Pawnee from their homelands in Nebraska to Indian Territory greatly affected the tribe's ability to grow crops as they previously had done. Corn that did make it to Indian Territory was brought in each family's sacred bundle,¹³⁶ although there were some families who continued to grow corn up into the late 1990s.¹³⁷

136. Echo-Hawk and O'Brien, "Saving the Pawnee Mother Corn."

137. Joseph Reed, Pawnee THPO, personal communication.

CHAPTER III

METHODOLOGY

Study Design

This study utilizes a qualitative research approach to explore questions of interest relating to the Pawnee Tribe of Oklahoma and cultural heritage preservation through their regrowing of ancestral corn as part of the Pawnee Seed Preservation Project. An inductive, qualitative exploration utilizing a grounded theoretical approach was utilized as a way to expand on research findings. The investigator collaborated with a community-based organization of the Pawnee Tribe and the Pawnee Seed Preservation Project (PSPP), to assist with study design, verification of the accuracy of information cited in reference to the Pawnee Tribe, implementation, and dissemination of the findings. Study protocol was submitted and approved by the Oklahoma State University Institutional Review Board, as well as reviewed by Deb Echo-Hawk of the Pawnee Tribe.

Study Site

Familiarization with proper research protocols in working with Native American tribes and constant communication with the Pawnee Tribe throughout the research process has prepared

me with conducting research involving underserved and marginalized populations. The community-academic partnership between Oklahoma State University and the Pawnee Seed Preservation Project, specifically working with Keeper of the Seeds, Deb Echo-Hawk, provided access to conduct research with tribal Elders within the Pawnee Nation.

The Pawnee Seed Preservation Project works to reclaim tribal culture, history, and foodways through the reintroduction of ancestral corn and other crops (such as beans) into the daily life of the tribe. The regrowing of these varieties of ancestral corn is limited to tribal members whose garden plot must first be approved by the Pawnee Seed Preservation Project, or to those gardeners in Nebraska who have been given special permission to grow the corn solely for the Pawnee tribe. Study questions and protocols were developed in collaboration with the Pawnee Keeper of the Seeds, Deb Echo-Hawk, and researchers with applied experience in working with rural and tribal communities.

Study Participants

To be eligible for the study, participants had to meet the following criteria: (a) be 18 years of age or older; (b) an English speaker; and (c), be selected as Pawnee Elder with extensive knowledge of the Pawnee Seed Preservation Project. In total, five participants participated in the study.

Participant Recruitment

Recruitment procedures were developed in collaboration with the Pawnee Nation to identify tribal Elders with the most applicable knowledge and experience with the Pawnee Seed Preservation Project. The core concepts of purposeful, voluntary sampling were utilized to identify participants for recruitment into the study.¹ In consultation with the community partner,

1. Sara A Becker, Dyanne D Affonso, and Madonna Blue Horse Beard, "Talking Circles: Northern Plains Tribes American Indian Women's Views of Cancer as a Health Issue," *Public Health*

Deb Echo-Hawk, potential participants were identified. Individualized study invitations were sent to identified tribal Elders to assess their interest in an interview with the primary investigator. Interview questions were screened by Deb Echo-Hawk before approval, as well as by the researcher's thesis committee members. These forms of recruitment procedures are standard protocol for conducting research within tribal communities, particularly when interacting with and reaching out to tribal elders, in the current era.²

In congruence with grounded theoretical framework studies, sampling and preliminary data collection occurred until data saturation was reached.³ Saturation occurs when no new codes or themes emerge from the collected data.⁴ Therefore, it was estimated that approximately 5 participants would be required to reach thematic saturation for this study. Saturation within the study occurred after the fifth interview.

Instruments/Measures

Eligibility screening of prospective participants was conducted through Deb Echo-Hawk and shared with the primary investigator. Those individuals who met the eligibility criteria and wished to participate in the study notified Deb Echo-Hawk who then shared their contact information with the primary investigator. Those identified who wished to participate in the study were scheduled for an interview via phone or through a Zoom based meeting according to the

Nursing 23, no. 1 (2006): 28; Gwen M Chodur et al., "Food Environments around American Indian Reservations: A Mixed Methods Study," *PloS one* 11, no. 8 (2016): 2-3.

2: Carmella B Kahn et al., "American Indian Elders' resilience: Sources of Strength for Building a Healthy Future for Youth," *American Indian and Alaska native mental health research (Online)* 23, no. 3 (2016): 2-3; C June Strickland, Elaine Walsh, and Michelle Cooper, "Healing Fractured Families: Parents' and Elders' Perspectives on the Impact of Colonization and Youth Suicide Prevention in a Pacific Northwest American Indian Tribe," *Journal of Transcultural Nursing* 17, no. 1 (2006): 6-7.

3: Juliet Corbin and Anselm Strauss, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Los Angeles: Sage publications, 2008), 145.

4: Corbin and Strauss, *Basics of Qualitative Research*, 143-45.

mutual agreement of the participant and the investigator. During the course of the individual, in-depth interviews, the investigator used a semi-structured interview guide that was reviewed for approval by the Pawnee Nation before interviews were conducted.

The interview guide contained open-ended questions and probes that explored key topics and subtopics of the study. Key topical domains included: participant involvement and interest in regrowing of Pawnee ancestral seeds and crops; the role of these foods in the participant's family history; importance of regrowing these crops; tribal health in relation to these crops; cultural revival; and, hopes for the tribe in relation to the project. Prior to the initiation of the interview, a brief pre-interview questionnaire was utilized to collect participant demographic information.

Data Management and Analysis

The in-depth interviews were digitally auto-recorded, transcribed verbatim via Dedoose software, and double-checked for accuracy against the recordings. A grounded theory approach, including the use of open and axial coding processes, was utilized to identify and interpret themes and concepts that emerged from the interview transcripts.⁵ Grounded Theory was developed in 1967 by Glauster and Strauss and it is used to build theory from data using inductive approaches to explore phenomenon.⁶ Concepts are derived from data and are the foundation of analysis.⁷ Related concepts are grouped together to form themes.⁸ Multiple readings of transcripts and interviews were conducted, as well as analytic induction via open and axial coding using Dedoose, an online mix-methods analytical platform.

5. Corbin and Strauss, 1.

6. Corbin and Strauss, 1.

7. Corbin and Strauss, 51.

8. Corbin and Strauss, 159.

Open coding of data involved assigning conceptual codes to small sections of words, phrases, and sentences in the transcripts and interview notes.⁹ This was followed by axial coding, whereby relationships will be identified among like concepts and combined into themes.¹⁰ Integration, the process of linking core themes, resulted in the final thematic hierarchy.¹¹ Coding check-ins were completed with the assistance and oversight of Dr. Randolph Hubach, an OSU Center for Health Sciences faculty member with extensive experience with conducting qualitative studies relating to rural and tribal health in Oklahoma.

9. Corbin and Strauss, 198.

10. Corbin and Strauss, 195-98

11. Corbin and Strauss, 87.

CHAPTER IV

FINDINGS

The Pawnee Seed Preservation Project

Deb Echo-Hawk, a member of the Pawnee Nation, had been growing Pawnee corn in Colorado where she and her cousin Alice lived but was encouraged by her brother Walter to hold onto it and not eat.¹ The realization that the Pawnee were the people of the corn and the people of the buffalo, but so little of their corn remained, led her and Alice to approach the Pawnee Cultural Committee for help to finding corn among the community.² This search looked for ancestral corn being kept among families in their family bundles.³

Corn had been carried to Oklahoma by the tribe in the mid-1870s when the tribe relocated from their homeland in Nebraska to their new lands in Indian Territory.⁴

1. Deb Echo-Hawk, Pawnee, discussion with author.

2. Deb Echo-Hawk, Pawnee, discussion with author.

3. Shay Burk, "Project Works to Grow Pawnee Corn," *Morning AgClips*, August 13 2017, <https://www.morningagclips.com/project-works-to-grow-pawnee-corn/>; "Seed Preservation Project Inspires Pawnee to Get Excited About Their History, Heritage," *The Grand Island Independent*, August 3 2017, https://theindependent.com/news/local/seed-preservation-project-inspires-pawnee-to-get-excited-about-their-history-heritage/article_0fbec2b8-78be-11e7-b174-eb6a50638e5e.html.

4. Hinton, "Sowing Sacred Seeds."; Project, "Protecting Seeds in a Pandemic."

Despite being prodigious farmers, the corn failed to grow in the clay soil of Indian Territory as it had done in the fertile soil of the Pawnee ancestral lands in Nebraska.⁹ Further damage was done to the Pawnee's ability to grow corn through children being pulled from their families and sent to boarding and industrial schools where they were expected to garden differently using plowing equipment.¹⁰ The inability to get loans to buy some of this equipment led many to cease agriculture.¹¹

With dwindling seed stock, in 1998 that Pawnee Elder Nora Pratt, whose Pawnee name is *Che-Sha-Nou-Ka-Nout*, blessed three varieties that had been gathered (Blue, Yellow, and Eagle Corn) in an hour-long prayer ceremony meant to help the corn grow and thrive for the Pawnee.¹² The blessing of the seeds by Elder Pratt was the beginning of the Pawnee Seed Preservation Project.¹³ The decision to allow the project to proceed was not easy for the tribe. Many of the elders were products of the boarding school system and did not grow up gardening. They felt that if it did not have the USDA stamp on it, they did not need it.¹⁴

The course of the PSPP would forever change in 2003 when Ronnie O'Brien, at the time the educational director of the Great Platte River Road Archway in Kearney, Nebraska, as well as a corn farmer, contacted Deb Echo-Hawk to inquire about the use of Pawnee seeds to help grow an instructional garden at the Archway.¹⁵ The Archway is a museum established to tell the story of the

9. Hinton, "Sowing Sacred Seeds."; Project, "Protecting Seeds in a Pandemic."

10. Deb Echo-Hawk (Pawnee, Keeper of the Seeds), in discussion with author, March 23, 2021.

11. Deb Echo-Hawk, Pawnee, discussion with author.

12. Bucco, "Pawnee Reclaim Their Sacred Corn."; Project, "Protecting Seeds in a Pandemic."

13. Echo-Hawk and O'Brien, "Saving the Pawnee Mother Corn."

14. Deb Echo-Hawk, Pawnee, discussion with author.

15. Burk, "Project to Grow Pawnee Corn."; Bucco, "Pawnee Reclaim Their Sacred Corn."; Project, "Protecting Seeds in a Pandemic."

Great Platte River Road's role in the building of America.¹⁶ It started as a project for a school program and out of respect for the friendship her husband's ancestors had received from the Pawnee, but it grew into something much bigger after speaking with Echo-Hawk and learning how big a role corn played in Pawnee culture.¹⁷ Despite growing up on a corn farm, O'Brien had never thought of corn as anything but a commodity until her interactions with Echo-Hawk, and it was from that point that she could no longer look at it the same way as she had.¹⁸ Since the Pawnees never traded or gave away seed, there was much discussion among Deb-Echo Hawk and the Pawnee Cultural Committee on whether to entrust seed to a non-tribal member. It was ultimately decided to share some with O'Brien in hopes that the dwindling stock would grow once more in familiar soil.¹⁹

Eagle Corn was the first corn variety that was attempted to be regrown. Only 50 kernels remained in an old mason jar in Pawnee, and these were entrusted to Ronnie O'Brien to attempt to regrow.²⁰ In 2004, 25 kernels were planted but failed to grow, but the last 25 planted in 2005 sprouted and produced 2,500 new seeds for the Pawnee.²¹ The PSPP has reintroduced a total of 18

16. "About Us," The Archway, accessed June 9, 2021, <https://archway.org/about-us/>.

17. Ronnie O'Brien (Pawnee Seed Preservation Project Partner), discussion with author, March 23, 2021.

18. Ronnie O'Brien, discussion with author.

19. Burk, "Project to Grow Pawnee Corn."; "Seed Preservation Project Inspires Pawnee."

20. Burk, "Project to Grow Pawnee Corn."; "Seed Preservation Project Inspires Pawnee."; Bucco, "Pawnee Reclaim Their Sacred Corn."; Hinton, "Sowing Sacred Seeds."; Project, "Protecting Seeds in a Pandemic."

21. Burk, "Project to Grow Pawnee Corn."; "Seed Preservation Project Inspires Pawnee."; Bucco, "Pawnee Reclaim Their Sacred Corn."; Hinton, "Sowing Sacred Seeds."; Project, "Protecting Seeds in a Pandemic."

varieties of ancestral corn to date with the recent appearance of a black sweet corn variety.²² There are also now over 17 gardeners involved in Nebraska.²³

It is believed that one of the reasons that the corn has done so well in its Nebraska homelands is that it retains a “soil memory” and remembers that it came from there.²⁴ They have what they consider “strengthening” and “weakening” gardens depending on the soil type.²⁵ Even though O’Brien is located on prime soil in Nebraska, the corn always grows best in the clay on the Loup River where the Pawnee traditionally grew.²⁶

All growers involved in the project must follow strict guidelines and sign the policy developed by Deb Echo-Hawk and Ronnie O’Brien.²⁷ Growers participate at their own expense, and must also realize, “...everything that they grow, and everything that they didn’t grow, any seeds that they received and that did not go in the ground, must be returned to the Pawnee at the end of their growing season. These are not our seeds. They are Pawnee, they belong to the Pawnee.”²⁸ The goal is to get 200 seeds of a given variety in each plot, but that isn’t possible for all varieties as some do not yet grow to the level to be in the seed bank stage.²⁹ The goal is to get

22. Deb Echo-Hawk, Pawnee, discussion with author.

23. Project, "Protecting Seeds in a Pandemic."

24. Deb Echo-Hawk, Pawnee, discussion with author.

25. Ronnie O’Brien, discussion with author.

26. Ronnie O’Brien, discussion with author.

27. Ronnie O’Brien, discussion with author.

28. Ronnie O’Brien, discussion with author.

29. Ronnie O’Brien, discussion with author.

all varieties to the seed bank stage by the 20th anniversary of the partnership with growers in Nebraska, which will take place in 2023.³⁰

This project is very important for the women of the tribe because it was the women that cared for all of the crops.³¹ This is true historically within the tribe where the women were in charge of horticulture. There are now many women in their thirties who are involved in the project, and it is they who will be heading this in the future.³² After receiving four years of training from a spiritual leader of the Arikara, Deb Echo-Hawk and the leader of the ceremony's sister were gifted a ceremony consisting of numerous songs, which was allowed to be incorporated as a Pawnee ceremony on the condition that it be performed the exact same way in Pawnee as it had been in Arikara.³³ It is the young women in the tribe that learn this ceremony curriculum which acts as a form of women empowerment.³⁴

In 2010, the Pawnee were able to serve Eagle Corn soup for the first time in 125 years at a ceremony for the Young Dog Dance, a healing ceremony, due to the production levels finally reaching a point where it could be consumed by the tribe.³⁵ This reintroduction of ancestral corn back into the Pawnee diet has been a great benefit to the health of the tribe. The corn is believed to have many healing properties for tribal members due to the high nutrition content.³⁶ The tribe is currently working on a program to incorporate the corn into the meals eaten by the children in the

30. Ronnie O'Brien, discussion with author.

31. Ronnie O'Brien, discussion with author.

32. Ronnie O'Brien, discussion with author.

33. Deb Echo-Hawk, Pawnee, discussion with author.

34. Deb Echo-Hawk, Pawnee, discussion with author.

35. Bucco, "Pawnee Reclaim Their Sacred Corn."; Deb Echo-Hawk, Pawnee, discussion with author, July 1, 2020.

36. Burk, "Project to Grow Pawnee Corn."; Bucco, "Pawnee Reclaim Their Sacred Corn."

community school, as well as find ways to incorporate it into the diets of the tribal elders who have historically had to have their menus approved for nutritional compliance to receive government food assistance.³⁷

To continue to support the growth of the program and educate members of the tribe, an intern program, supported by grant funding secured by Deb Echo-Hawk, has sent over 22 interns to stay in Nebraska at the Central Community College while learning about Pawnee history and helping to monitor crop growth and production.³⁸ The University of Nebraska at Lincoln is working to genetically analyze their corn, with one of the goals being able to hopefully trace where the Pawnee came from historically by looking at the corn's DNA.³⁹ Further partnerships have been developed with Langston University, Oklahoma State University, Catholic Climate Covenant (CCC), and the AmeriCorps.⁴⁰ Last year the PSPP had 17 AmeriCorps volunteers helping with the project for 10 weeks, and this year they are aiming for 50 volunteers.⁴¹

According to O'Brien, the Elders "...are a generation that never had the corn. This did not exist for them, but yet they never, the Pawnee never lost that memory of how important that corn is to them."⁴² Deb Echo-Hawk related that years later after the project began, one elder chief who had been opposed to the project came up to apologize before breaking down in tears after stating that "when the Pawnees moved down from Nebraska and they lost a lot of ceremony along the way, as whole families in control of bundles would be gone, and it was his opinion that it was gone and

37. Deb Echo-Hawk, Pawnee, discussion with author.

38. Burk, "Project to Grow Pawnee Corn."; "Seed Preservation Project Inspires Pawnee."

39. Deb Echo-Hawk, Pawnee, discussion with author; Ronnie O'Brien, discussion with author.

40. Deb Echo-Hawk, Pawnee, discussion with author.

41. Deb Echo-Hawk, Pawnee, discussion with author.

42. Ronnie O'Brien, discussion with author.

a thing of the past...but you've done some much. You've really brought back the corn and the people will love it.”⁴³

Results

Analysis of the interview transcripts revealed four major thematic categories relating to the regrowing of Pawnee ancestral corn as part of the Pawnee Seed Preservation Project: (a) Corn's Role in Pawnee Culture; (b) Pawnee Health Related to the Reintroduction of Corn into the Diet; (c) Business and Scientific Interests and Endeavors; and (d) Collaboration with Non-Pawnees to Increase Access to Ancestral Corn. In addition, the theme “Corn's Role in Pawnee Culture” was further divided into five subthemes: (a-1) Identity; (a-2) Tradition; (a-3) Spiritual Role of Corn; (a-4) Ceremonial Role of Corn; and (a-5) Changing Demographic Interest in Growing Corn. The major theme “Collaboration with Non-Pawnees” was also divided into two subthemes, (f-1) Allies, and (f-2) Reconciliation. These subthemes all serve to further strengthen the major theme under which they are categorized.

43. Deb Echo-Hawk, Pawnee, discussion with author.

Table 1

Emergent Major Themes and Associated Subthemes

Major Theme	Associated Subtheme(s)
Corn’s Role in Pawnee Culture	Identity Tradition Spiritual Role of Corn Ceremonial Role of Corn Changing Demographic Interest in Growing Corn
Pawnee Health Related to the Reintroduction of Corn into the Diet	
Business and Scientific Interests and Endeavors	
Collaborations with Non-Pawnees to Increase Access to Ancestral Corn	Collaboration Reconciliation

Corn’s Role Pawnee Culture

Identity

A common theme that emerged from the majority of participant responses was the important role corn has had in forming the identity of the Pawnee people. As a tribe that excelled in agriculture and who incorporated corn into all ceremonies, feasts, and even in their creation story, corn has been inseparable from the Pawnee identity. This is reflected in the following statements by participants: “As such, I believe that our Mother Corn is the foundation of Pawnee

culture and that it is important to grow our heritage crops because they support the corn”⁴⁴; “We don’t want to lose that. It’s part of what makes us a tribe, even, you know, just like our language makes us a tribe, our relationships with one another, our history, and it’s important to pass on what little we know yet now to our younger ones,”⁴⁵ and “And so, you know, I, I personally feel instinctively, you know the, the corn was part of that journey because it was, it was part of them. It was their everyday life.”⁴⁶ Another participant shared the following statement about corn’s role in Pawnee identity,

“Oh, I, I think it's important. Um, you know, there's a sense of something that has been lost that, that, uh, managed somehow to survive and is, is now kind of being brought back to life. And I think it provides people with a sense of connection to heritage. Um, I think it, it adds something to a sense of, uh, identity and yeah, the, the connection to, to the history of it, all I think is a very important piece in, in, um, people kind of having a different kind of understanding of who they are.”⁴⁷

That statement is reflective of other participants views that the corn being regrown as part of the PSPP is giving back the Pawnee a sense of identity and helping them understand who they are. There was also the belief shared by one participant that gardening is an innate trait of the Pawnee with the statement, “And so, when you’re talking about gardening and everything, um, I, you know, I feel for most Pawnee, you know, gardening, it’s in their blood. It’s, I view it as an inborn

44. Elder 3, Pawnee, in discussion with author, April 5, 2021.

45. Elder 3, Pawnee, discussion with author.

46. Elder 5, Pawnee, in discussion with author, April 8, 2021.

47. Elder 1, Pawnee, in discussion with author, March 15, 2021.

trait...”⁴⁸ This statement shows that even today, agriculture serves a prominent role in helping to shape Pawnee identity.

Awareness of the loss of corn and its effect on Pawnee culture is another theme that emerged prominently in the response of one participant. In response to the question “Did you hear any stories about foods being consumed that were no longer being grown by the tribe?” the participant replied with:

“Uh, well, I’m not sure exactly how to answer that. The fact that Pawnees, were, had an agricultural component to the way they had lived traditionally, that was understood. And that was, you know, an important thing, but it was kind of regarded as something in the lost category. Um, that way of that way of life was something that had been left behind. And I mean, it was just a piece of the culture that was lost along with the Buffalo hunt. I mean, those were the two main things that were, that described the Pawnee lifecycle through, I mean, uh, the annual cycle through each year, going back and forth between the hunt and the harvest and the gardens, but that was all lost.”⁴⁹

Tradition

Another common theme that emerged from participant responses was the role corn serves in the Pawnee traditional way of life. In response to the question “Did you hear family or other members of the tribe speak about the loss of Pawnee corn or other historical crops?” one respondent stated,

“I didn’t realize, uh, much about that as a kid growing up, I knew that corn was a significant thing. It was part of the diet and it had, uh, cultural and traditional connections

48. Elder 5, Pawnee, discussion with author.

49. Elder 1, Pawnee, discussion with author.

to the way the Pawnees have eaten all along. But the fact that traditional corn was not being used and that in place, you know, a modern commercial variety was being used. I didn't have much of an awareness of that when I had an awareness of the significance of corn in the Pawnee diet and ceremonial uses.”⁵⁰

Not only is there an awareness of the traditional role that corn has served in Pawnee culture, but an evident desire to keep traditions alive even as the tribe looks to possible scientific and business endeavors relating to corn in the future with one participant stating, “And the other half of it, you know, is we have to always, as this science and tradition and culture, you know, as they meld together, we also have to take careful consideration to know that we have to remember our traditional ways”⁵¹, further going on to elaborate, “So that, that seeing our 21st-century ways come in and scientific practices, you know, uh, we need to also remember that as they meld our tribal traditional need to be at the forefront at as well.”⁵² The participant also stated, “...but also we don't want to lose any of the old traditions or ways that our people, you know, told us as we were growing up. We have to, it's important to remember, you know, where those seeds came from and that they belong to the Pawnee Nation and the history.”⁵³

Spiritual Role of Corn

While only identified by one participant, the sacred and spiritual role that corn serves in Pawnee was emphasized strongly enough that it must be presented as further evidence of corn's defining role in Pawnee cultural identity. When asked why the participant thinks it is important to continue to grow historical crops, the individual stated:

50. Elder 1, Pawnee, discussion with author.

51. Elder 5, Pawnee, discussion with author.

52. Elder 5, Pawnee, discussion with author.

53. Elder 5, Pawnee, discussion with author.

“Well, these are, um, these are our sacred, as far as corn you know, it's, it's our, our sacred food. Like I mentioned earlier, you know, it was a way, way of life. You know, it was the only food source that was put into the sacred bundles that the tribe had, you know, centuries ago...”⁵⁴

This participant further elaborated and emphasized the spiritual role of corn with the following statements: “...it's a spiritual thing because when you look at it, these were created centuries ago by heart, our ancestors, and they're still trying to live, they're still trying to revive themselves”⁵⁵ as well as stating:

“And they're still speaking, you know, to us, I mean, if you look, if you go through what a harvest and you see the corn and you look at the individual kernels, you know, it's, as if they're speaking out to you and they want to tell you their story, and the reality is, they were brought about by many prayers that were said thousands of years ago by our Pawnee people to be used for future generations. And you look at them and you think, that's true, look, they're, speaking to us. It's as if, you know, what story can they tell? Each one is, if you look at it, they're all different. They, you may think they look alike, but spiritually they're all different and they need to be kept because it's, it's a matter if they were to leave, you know, then that's part of our heritage.”⁵⁶

Ceremonial Role of Corn

Among participants, there was varying awareness of the roles that ancestral corn brought back by the PSPP had on Pawnee ceremonies. Most were aware of the corn being used in modern ceremonies from the statements: “A ceremony or ritual that has been revived within the tribe as a

54. Elder 5, Pawnee, discussion with author.

55. Elder 5, Pawnee, discussion with author.

56. Elder 5, Pawnee, discussion with author.

result of growing these historical varieties of crops: at dawn, group prayers, both spoken and sung, for the success of growth”⁵⁷; “the food is shared and it’s grown specifically for specific ceremonies or dances”⁵⁸; “Not so much revived, but more or less the blue corn has been grown recently in the past five years, has been more or less incorporated to enhance these ceremonies...”⁵⁹ Another stated:

“And so it would be basically from the Seed Preservation Project, probably, the two most important things would be the man who goes out early in the morning and does a private ceremony asking Atius, who is our Lord, to look after the traditional planting season that’s about to take place...That is revived...And then the other thing is that as other people come to get their seeds to plant for the new spring season, the Seed Blessor does the seed blessing for the seed.”⁶⁰

One participant was not sure if there were any ceremonies revolving around corn known by people today but stated that any ceremony would most likely be tied to it. A common theme that emerged from the interviews was the praise of the PSPP what it is doing for the Pawnee Nation. As one participant stated, “...I think this corn project is probably the best thing Pawnee has had in the last 60 years.”⁶¹ In response to a question about increasing interest in growing historical crops as a result of the project, another shared, “But thank God for Deb Echo-Hawk. Thank God for Deb Echo-Hawk because she has kept it alive. She is a Pawnee national treasure.”⁶² One participant shared, “it’s very very important that we hang onto this and we keep

57. Elder 2, Pawnee, personal communication, April 5, 2021.

58. Elder 4, Pawnee, in discussion with author, April 7, 2021.

59. Elder 4, Pawnee, discussion with author.

60. Elder 5, Pawnee, discussion with author.

61. Elder 4, Pawnee, discussion with author.

62. Elder 3, Pawnee, discussion with author.

the movement alive and keep it moving. And I think that will be because of the Seed Preservation Project.”⁶³

Changing Demographic Interest in Growing Corn

Nearly all participants shared the opinion that it is the younger generation who are showing the most interest in the regrowing of ancestral corn as part of the PSPP. A variety of statements illustrate this: “And, um, there’s a building of momentum, some younger people have taken up an interest and have gotten involved with the activity of it all”⁶⁴; “Those in their 20s to 60s”⁶⁵; and “I would have to say it’s probably the elders and the youth...”⁶⁶ Another participant shared they have noticed younger men become interested because of gardens grown in Pawnee in conjunction with Oklahoma State University.

A statement that may reflect a desire for women empowerment among that Pawnee was found in the response of one participant who stated, “I would like to see a renewed interest in our, especially our women, you know? Our women grew the corn, and well women, we’re a matriarchal society, and I would like to see more women be involved with that, raising corn and also learning to cook...”⁶⁷

Possible evidence of a growing interest among younger women taking an active role in growing corn was shared by one participant who shared “Oh, right now. Oh my goodness. It’s the

63. Elder 5, Pawnee, discussion with author.

64. Elder 1, Pawnee, discussion with author.

65. Elder 2, Pawnee, personal communication with author, March 15, 2021.

66. Elder 4, Pawnee, discussion with author.

67. Elder 3, Pawnee, discussion with author.

young Pawnee women. Definitely, most definitely the young Pawnee women”⁶⁸ in response to the question on who is showing the most interest.

Pawnee Health Related to the Reintroduction of Corn into the Diet

Participants were very clear about the role corn plays in the Pawnee diet and how it affects their health, both positively and adversely. One participant spoke to health issues stemming from their traditional life being disrupted by stating, “the dietary changes that happen, when indigenous people were, you know, their way of life was quashed...brought with it a lot of health problems, diabetes, and that sort of thing. Obesity.”⁶⁹ About the lack of historic crops in the Pawnee diet, one participant shared, “I would say it’s been really missed in our diet as far as, especially with the elders.”⁷⁰

Many participants also expressed optimism about the health benefits gained from these historical crops. One participant spoke to the healing qualities of the foods in the diet as the following statement illustrates: “With a high percentage of tribal members and descendants struggling with diabetes, for instance, the heritage crops can help in the healing process.”⁷¹ Others spoke to cultural, mental, and nutritional benefits with such statements as: “So restoring the diet has cultural, but it also has health benefits too”⁷²; “what other healthier item can you have, you know? You get energy from it. You get nourishment from it...and it’s going to help us survive and be healthy as well”⁷³, and “And so spiritually, the affect our mental health...because there’s

68. Elder 5, Pawnee, discussion with author.

69. Elder 1, Pawnee, discussion with author.

70. Elder 4, Pawnee, discussion with author.

71. Elder 2, Pawnee, personal communication.

72. Elder 1, Pawnee, discussion with author.

73. Elder 5, Pawnee, discussion with author.

meaning behind the corn.”⁷⁴ One participant further elaborated “there’s a whole movement in the Pawnee Nation and indigenous people in this country, and I think, really around the world, of restoring indigenous diets, and it’s kind of a must do for health purposes.”⁷⁵

Business and Scientific Interests and Endeavors

A few participants shared their hopes that there may be some commercial and scientific benefit to crops being back as part of the PSPP. Two participants shared the following: “And overall, I’d like to see the production continue to increase so that there may be some sort of commercial advantage to the tribe having a crop to manage”,⁷⁶ and the other stating, “we have new opportunities that are way different from our ancestors had thousands of years ago. And what I mean by that is, you know, there’s commercialism and there’s production.”⁷⁷ One participant shared their desire to see a possible patent on the Pawnee corn being grown: “possibly the Pawnee Nation and the Nebraska farmers that are growing corn for us, they can all, um, understand or get maybe a patent on specific corn related just to the Pawnee homeland, which is Nebraska.”⁷⁸ When asked what the benefit of a patent would be the respondent replied, “more or less right now there’s thousands of strands of corn [globally]. And the patent, I think, would be more or less to keep it contained not to be overused.”⁷⁹ Another participant shared some of the current projects of the PSPP when they stated, “There’s DNA testing that’s being done.”⁸⁰

74. Elder 3, Pawnee, discussion with author.

75. Elder 1, Pawnee, discussion with author.

76. Elder 1, Pawnee, discussion with author.

77. Elder 5, Pawnee, discussion with author.

78. Elder 4, Pawnee, discussion with author.

79. Elder 4, Pawnee, discussion with author.

80. Elder 5, Pawnee, discussion with author.

Collaboration with Non-Pawnees to Increase Access to Ancestral Corn

Collaboration

Among a couple of the participants, there was a strong focus on the idea of allyship and reconciliation centered around the regrowing of these ancestral varieties of corn. This is reflected in the following statement:

“You’re probably aware that Deb and Ronnie have developed a network of growers, allies, white agricultural type people in Nebraska...so if it wasn’t for the collaborative effort, the amount, the volume, the quantity of annual production would be much lower, and the restoration of the varieties that were lost would be a much slower process.”⁸¹

The other participant offered great praise for the partnership between the PSPP and growers in Nebraska with statements such as, “I would be really remiss if I didn’t mention that the Nebraska growers, they have such a big part in the revival of our seeds...for planting these seeds up there in their natural habitat, so to speak.”⁸² This was further elaborated with the statement, “And so without the people from up in Nebraska and their interest as well in our corn, who knows where, you know, how far this project could have come without them.”⁸³

Reconciliation

Offering some insight into possible reasonings behind non-Pawnee grower motivations, one participant shared the following:

81. Elder 1, Pawnee, discussion with author.

82. Elder 5, Pawnee, discussion with author.

83. Elder 5, Pawnee, discussion with author.

“It’s actually a very tangible from of what I call a healing of relationships between, you know, Nebraskans whose heritage is there. They descended from settlers that displaced Pawnee people and they have their own feelings about that history. And I think there’s a theme of reconciliation that’s developed around this corn restoration project.”⁸⁴

84. Elder 1, Pawnee, discussion with author.

CHAPTER V

SUMMARY AND DISCUSSION

Summary

The current research study found that the Pawnee Seed Preservation Project has been successful in reviving Pawnee culture through the regrowing of ancestral seeds, specifically corn. Pawnee Elders in the research study discussed, in varying responses, the role corn serves in forming Pawnee identity, traditions, spirituality, its reincorporation into ceremonies, and how the project is influencing a younger demographic to become involved. These Elders also discussed the health benefits of the corn to the tribe in both nutritional and mental health terms. A number of these Elders also discussed the business and scientific implications associated with reviving the ancestral varieties of corn that are being brought back. Lastly, these interviews showed that a couple of the Elder participants also view the project as a form of reconciliation and collaboration with groups whose ancestors may have historically displaced and altered the Pawnee traditional way of life. Reflective of Trichopolou et al.¹ and Murcott's² research findings on the cultural significance of food and what it embodies in terms of history, beliefs, social values, and lifestyle, study participants responses also supported these ideas. The results of the qualitative interviews strongly suggest that more than just being a source of food, corn is inseparable from Pawnee

1. Trichopoulou, Soukara, and Vasilopoulou, "Traditional Foods: A Science and Society Perspective," 420.

2. Murcott, "The Cultural Significance of Food and Eating," 203.

identity. While responses varied by participant, there was a common theme that corn is the foundation of the culture and is part of their identity. Participant responses on the spiritual and sacred role of the corn mirrored statements by Will and Hyde that spoke to the sacred role of corn outside of just being a food source for many of the tribes.⁸³ According to participant responses, there were two types of spiritual roles identified: one being spoken of in terms of a health benefit and the other in the traditional religious sense. Rachel Vernon described food's role in building community, interconnectedness, and well-being among Native groups today.⁸⁴ This belief is supported by the current study where participants spoke to the benefit of the PSPP to the Pawnee community and the growing involvement of a younger generation in the growing process. One participant's response expressed a desire for women to once again take an active role in the corn growing process as they had historically done, something that was noted by Will and Hyde, Parks, and Kinbacher.⁸⁵

Numerous researchers have spoken to the adverse effect on indigenous diets directly related to centuries of colonization, modernization of agricultural practices, forced relocation of tribes, the boarding school system, and reliance on government.⁸⁶ Although the Pawnees' removal to Indian Territory was a decision made by the tribe collectively, they nevertheless saw their culture change as a result of the move and adopting a different way of life than previously known. A couple of individuals in the study described obesity and diabetes as being attributed to the change in the traditional Pawnee diet. Health benefits tied directly to eating historic crops that have been reintroduced into the diet were also discussed. Many researchers have spoken to the

83. Will and Hyde, *Corn among the Indians*, 248-50.

84. Vernon, "A Native Perspective," 139.

85. Kinbacher, "Indians and Empires," 211; Parks, *Pawnee*, 13, 525; Will and Hyde, *Corn among the Indians*, 84-87.

86. Hoover, "Defining and Enacting Food Sovereignty," 36; Mihesuah, "Searching for Good Health," 11.

food sovereignty movement among indigenous peoples to repair their relationship with the natural world, promote individual and community health, and repair damages done to health by dietary changes.⁸⁷ One participant described a movement reflective of this within the Pawnee Nation for health purposes. Numerous health benefits to the tribe attributed to consuming ancestral varieties of corn were also prevalent among participant responses.

The use of corn for potential business endeavors was also identified in the current study among participants. A couple of the individuals noted that they would like to see a commercial advantage tied to increasing the production of ancestral corn. Loosely tied to the earlier referenced literature on intellectual property rights of indigenous groups within the United States was a desire for a possible patent on Pawnee corn to prevent overuse. Previous research shows that securing intellectual property rights through copyrights, patents, and trademarks tend to be a challenge for Native American groups as those methods favor the individual over the group.⁸⁸ DNA testing is also currently being undertaken by the Pawnee tribe.⁸⁹

A unique theme to emerge from participant responses was of collaboration with non-Pawnee growers whose efforts to help grow ancestral corn as part of the project has been instrumental in bringing it back. These growers have greatly increased the volume of corn grown. Their efforts have enabled the project to restore many of the varieties that were almost lost. While noted by just one participant, there was a theme of reconciliation recognized as taking place due to this relationship between the Pawnee Nation and non-Pawnee growers helping with the project. As the participant stated, some may be growing the traditional corn as a way to help heal some of the wounds that their ancestors may have played in displacing the Pawnee from their ancestral

87. Coté, "'Indigenizing' Food Sovereignty," 58; Mailer and Hale, *Decolonising the Diet*, 154.

88. Guest, "Intellectual Property Rights and Native American Tribes," 114; Moran, "Legal Means for Protecting Intangible Cultural Heritage," 78-79.

89. Elder 5, Pawnee, discussion with author.

homelands in Nebraska. Historically, the Pawnee forged friendships with many of the settlers to Nebraska, and this collaboration has rekindled these relationships with many of these growers becoming like family.⁹⁰ These seeds have allowed the tribe to maintain ties to their homelands in Nebraska while simultaneously building friendships and improving the health of the tribe.⁹¹

Implications

The Pawnee Seed Preservation Project began as a way for the Pawnee tribe to prevent further loss of ancestral varieties of corn and other crops and regrow them for the tribe. Reviving these ancestral seeds meant preserving Pawnee cultural practices that had suffered greatly due to a forced change in the Pawnee way of life after removal from their ancestral homelands in Nebraska.

The findings of this study suggest that regrowing ancestral varieties of corn through the PSPP has significantly contributed to preserving the culture and tradition of the tribe. It is clear that corn continues to play a prominent role in Pawnee identity, traditions, spiritual beliefs, and ceremonies. These results highlight the benefits of continuing to grow ancestral seeds. Continuing interest among the younger generation within the tribe could help ensure continued growth of the project and increasing seed stock which could lead to possible business opportunities for the tribe and health benefits to those who consume the final product.

The success of the project could serve as a model to other indigenous groups within the United States or abroad who wish also to reclaim cultural heritage through the practice of seed preservation. Resources highlighting the steps the Pawnee tribe took to identify holders of seed stock in the community, listing eligibility criteria for those who wish to grow as part of the project, and examples of the successful benefits to the tribe should be highlighted and promoted.

90. Deb Echo-Hawk, Pawnee, personal communication, July 13, 2021.

91. Deb Echo-Hawk, Pawnee, personal communication.

The current study underscores the health benefits to tribal members who consume the ancestral corn as part of the PSPP. Participants reported that corn improves the physical health of the tribe as a highly nutritious product. It also provides mental and spiritual benefits. Continuing to expand the production of certain varieties of corn may help reintroduce these healthier varieties into the daily diet of the tribe as opposed to on special occasions. The nascent literature has noted that integrating ancestral corn into school and elder meal programs may also lead to decreasing rates of diabetes and obesity that are issues for the tribe.⁹² Concurrently, food insecurity within tribal communities is often associated with systemic poverty. Raising corn production rates could possibly lead to the tribe being able to sell excess amounts of the final product should they decide to do so. Developing a business plan with the Business Council could help find avenues and ways to sell the corn produced and reinvest that money back into the PSPP and community.

Recommendations for Further Research

While this study identified numerous ways seed preservation by the PSPP is reviving Pawnee culture, improving community health, and providing possible avenues for economic growth, the limited scope of the study revealed the need for greater research on the long-term implications of the project for the Pawnee Nation. Areas that would benefit from further research include: perception of the project among all members of the Pawnee tribe; implications of reintroducing ancestral corn into the diet of the community; women's empowerment initiatives; and, business endeavors.

The study generated positive results on the impact of regrowing ancestral seeds on Pawnee culture. By continuing to expand the research to include enrolled members of the Pawnee tribe without ties to the PSPP, it may provide more insight into the community's

92. Beverly Patchell and Karethy Edwards, "The Role of Traditional Foods in Diabetes Prevention and Management among Native Americans," *Current Nutrition Reports* 3, no. 4 (2014): 340-44.

perception on the project and its role in cultural heritage preservation. Discussing the project's history, success, and benefits with those who are not involved may possibly result in greater participation in the project and a desire to learn more about corn's role in the Pawnee history and identity. Numerous participants spoke to the benefits of consuming ancestral corn for the Pawnee. Obesity and diabetes remain issues within the community, and this corn is nutrient-rich and also benefits the mental health of those consuming it. Deb Echo-Hawk spoke of how the tribe is looking for ways to incorporate the corn into the daily diet of the Elders and into the meals of a local school. Researching ways to implement the corn into the diets of tribal members is necessary to help combat the health issues stemming from changes to the Pawnee diet over time. Implementing into the daily diet of the tribe is dependent on many of the varieties of corn reaching a production rate high enough that it can be both consumed while not affecting seed stock in the seed bank.

Creating opportunities to empower the women of the tribe has been of great importance to those involved in the project. Women were traditionally the horticulturists in charge of planting and growing crops, and this revival of ancestral Pawnee corn varieties is once again allowing women to take a lead role in gardening. A desire to see more women involvement was discussed by a participant in the study, as well as it being noted by another that there are a growing number of younger women involved in the project. As noted earlier, one of the ceremonies revived by the Pawnee was one learned from the Arikara. This ceremony consists of numerous songs covering a wide range of topics, but it is important to note that this curriculum is designed specifically for the women of the tribe to learn. Finding ways to continue to teach this curriculum to the younger women in the tribe, as well as continuing education on the important role Pawnee women played in the growing of crops may contribute to female empowerment within the tribe.

A desire for corn grown as part of the PSPP being used for economic gain for the tribe was identified in the study. Identifying ways in which corn can be used as a commercial

advantage for the tribe should be further researched. Research on the types of products that can be derived from corn and sold should be further investigated. Corn grown as part of the project is being genetically analyzed. Finding ways to possibly patent the corn could also give peace of mind to the tribe that the seeds would remain protected and pure as they historically have. Funds received from the sale of the corn grown can then be reinvested into the community and help further grow the project. Agritourism is another area that should be further researched. Creating gardens that educate the public on the history of Pawnee corn, its role in Pawnee culture, and the benefits it brings to the tribe in terms of health and economic growth should be explored.

Conclusion

The present study assessed the Pawnee Seed Preservation Project's role in reviving and preserving the cultural heritage of the Pawnee tribe through the regrowing of ancestral seeds. Interviews with Pawnee Elders associated with the project showed that corn remains intrinsically linked to Pawnee identity, culture, and spirituality. The success of the program has led to improving the health of the tribe, a revival of corn in ceremonial functions, possible economic benefits, and a growing interest in a younger generation to participate. It has also served a role in building stronger ties with non-Pawnee who play a key role in bringing back these sacred varieties of corn.

While the project was not created as a response to global movements of other indigenous peoples related to traditional foodways, it is nonetheless reflective of these movements in terms of what it provides the Pawnee in terms of food sovereignty, protecting traditional culture, and improving the health of the tribe. As traditional foodways of indigenous peoples continue to be threatened by outside influence, the PSPP can serve as a successful model of how culture and identity can be preserved through patience, prayer, and perseverance.

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APPENDICES

Assessing Elder Perspectives on Revitalizing Pawnee Native Crops INTERVIEW GUIDE

Version: January 10, 2021

Study ID: _____

Interviewer: _____

Date of interview: _____

Location of interview: _____

Time: _____ am/pm

Introductory statement for all research participants:

[After obtaining Informed Consent]

First of all, I would like to thank you very much for participating in this project.

We're going to talk to you about your experiences related to the Pawnee Seed Preservation Project and the importance of traditional Pawnee crops within Pawnee Culture. If any of the questions we talk about make you feel uncomfortable, please let me know. We can go on to the next question or end the interview if you want.

If you need a break at any time, just let me know.

Do you have any questions for me before we start?

I. **Demographics / Intro**

Estimated time: Less than 10 minutes—Very Brief

Intro: Before we start the interview, I would like for you to answer some very brief questions about yourself. Okay?

(Conversational—building connection and learning about participant)

Question	Objective
<p>1. If it is okay, tell me a little about yourself. What is your first and last name?</p> <ul style="list-style-type: none">a. Are you originally from Pawnee, Oklahoma?b. When were you born?c. Which band (clan) do you belong to?	

II. **Pawnee Seed Preservation Connection**

Estimated time: 10 minutes

Intro: I would like to ask about your connection to the Pawnee Seed Preservation Project and/or the regrowing of historical Pawnee crops

Question	Objective
<p>1. How long have you been involved with the Pawnee Seed Preservation Project?</p> <ul style="list-style-type: none">a. How did you become interested in regrowing historical varieties of Pawnee crops?	To understand the relationship with Pawnee traditional

III. Cultural

Estimated time: 40 minutes

Intro: Now I would like to ask some questions relating to cultural ties to Pawnee corn

Question	Objective
<p>1. Growing up, did you hear family or other members of the tribe speak about the loss of Pawnee corn and other historical crops?</p>	<p>To understand the awareness of these crops among the Elder before the creation of the Seed Preservation Project</p>

Question	Objective
<p>2. Did you grow up eating any traditional foods made from these crops?</p> <p>a. Did you hear stories about foods being consumed that were no longer grown by the tribe?</p>	<p>To learn the role these crops played in the family</p>

Question	Objective
<p data-bbox="488 243 943 386">3. As a member of the Pawnee Tribe, why do you think it is important to continue to grow these historical crops?</p> <ul style="list-style-type: none"> <li data-bbox="586 436 932 541">a. What does it mean to the tribe to have these back? <li data-bbox="586 552 959 657">b. How do these crops affect the health of tribal members? 	<p data-bbox="989 243 1406 386">To understand the role these corn varieties and other historical crops serve within the tribe</p>

Question	Objective
<p data-bbox="488 1022 971 1226">4. Have you noticed an increased interest within the tribe in growing historical crops since the creation of the Pawnee Seed Preservation Project?</p> <ul style="list-style-type: none"> <li data-bbox="586 1310 964 1373">a. Who has shown the most interest? <li data-bbox="586 1425 943 1608">b. Is the history of these crops shared with other tribal members at gatherings or through newsletters? 	<p data-bbox="1000 1022 1414 1127">To understand awareness of the efforts of the project within the Pawnee Tribe</p>

Question	Objective
<p>5. Are there any ceremonies or rituals that have been revived within the tribe as a result of regrowing these historical varieties of crops?</p>	<p>To identify what ways these crops may help preserve and promote Pawnee cultural practices</p>

Question	Objective
<p>6. What are your hopes for the future of the project and the crops that have been regrown from those efforts?</p>	<p>Determine what the hopes of the Elders are for the Project and the role it plays within the tribe</p>

Conclusion:

Well, that is the end of our interview today. How are you feeling? Do you have any questions for me before we end this session?

Thank you so much for being a part of our study.

VITA

Samuel Kevin Ball

Candidate for the Degree of

Master of Science

Thesis: REGROWING THE PAST TO PRESERVE THE FUTURE: CULTURAL
HERITAGE PRESERVATION THROUGH THE PAWNEE SEED
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