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Preface

Chicken and dumplings, stew and fry bread, and corn soup. Every Saturday or Sunday, the paternal side of my family would get together and eat at my grandparents' house on 4 Mile Road. These gatherings were not to always to celebrate any special occasion, but to celebrate each other as a whole. There was too much food for any of us to eat all up, but never enough of anything my Auntie Eileen prepared.

You see, my family is a part of the Mt. Scott Comanche community. On this land is where my grandpa, Russell Wahkinney, and grandma, Dorothy Whitewolf-Wahkinney, were raised. The allotment acreage was given to my grandpa after he and my grandma were married by his uncle, A.B. They raised all sixteen of my aunts and uncles on this land and my family still lives on that land today.

On Saturday mornings, my grandparents would pick my sister and me up for the day, and we would go eat, shop at garage sales and Big Lots, maybe even stop at Taft Groceries for bologna. We always made it back to their house in time to get dinner ready. My sister was always helping my grandma do whatever she could at her age. As she got older, my grandma taught her more. I was usually running wild around on land or giving my grandpa a hard time. All of a sudden, more and more of my family would begin to show up, and right on time, my grandma would have supper ready.

My relations, as with many families, have always been around food. Although the foods I listed thus far are not inherently Comanche, for my thesis research I have chosen to focus on food that has always been used by Comanche people and to examine how that is still being used today. This work is inspired by recent food initiatives within indigenous communities in the United States, with the goal of determining what Comanche people are currently doing about our ways of eating. Let us be reminded by Leslie Marmon Silko that we “depend upon the collective memory through successive generations to maintain and transmit an entire culture, and worldview complete with proven strategies for survival” (Silko 1996).

Introduction

This thesis gathers narratives about foods used and prepared by Comanche people through discussions with individuals that reside in the boundaries of the Kiowa-Comanche-Apache Reservation in Oklahoma. Within this arbitrary boundary are different Comanche communities from areas like Walters, Lawton, Elgin, Cache, Indianola, Fletcher, Sterling, Richard Spur, Mt. Scott, and Apache. People from all of these different communities are known to hold knowledge of plants and food.

Food has always been important to societies and cultures from everyday life and over generations. Yet, very few societies still eat the same way that they did 500 years ago. Today, indigenous people are challenged by settler colonial outcomes to reclaim our food ways and the knowledge that is engrained in them. Embodied in our food are stories, language, and place-based relationships. Knowledge of food ways in Comanche culture means more than revisiting a “Plains Indian” stereotype of only getting sustenance from bison hunts, yet, the documented food systems in Comanche culture is barely scratching the surface, especially in contemporary life.

I analyze this according to Enrique Salomon’s Resilience Theory (Salmon 2010). Salmon discusses food used by indigenous people through modes of generational knowledge transmission. These modes are addressed by *long-term memory* and *short-term memory*, but I also choose to add *implicit* and *explicit memory* to the conversation of Resilience Theory. By analyzing my sources’ narratives and anecdotes, I address forms of Comanche resilience in terms of the current modes of stabilization. Modes of stabilization adhere to what is currently happening within knowledge transmission.

I often relied on conversations with elders to also put together a list of plants that have been documented previously by Anglo ethnobotanists and ethnographers. This list of plants has been used and quoted by other ethnobotanists since 1933, and many Comanche names for plants are missing or incorrect. I have worked to correct those identifications, and also updated the orthography. Because of concerns for biopiracy and the accessibility to my research, I chose to

leave out medicinal use of plants and locations where we gather these plants. If someone is using my research in the future, they know who holds this information, and decisions can be determined from there about how our plant information is released.

In the first chapter of this thesis, I provide background on food, society, and culture. This includes a broad review of food in all societies, transmission of food knowledge in Indigenous communities, and a brief history of food and knowledge transmission within the Comanche Nation. In the second chapter, I explain my methodology and the framework for my research, as well as my own lens through which I analyze the narratives. My third chapter is a compilation of narratives that explore the experiences with food that members of the Comanche Nation grew up with and are working on now. I also discuss what my participants knowledge of food is doing for the community at large. In chapter 4, I discuss why modes of memory stabilization matter to Comanche people and how *implicit* and *explicit memory* is important to knowledge transmission. In conclusion, I will discuss what makes our food *Comanche*, and my limitations to my research and what I have contributed to the discussions of knowledge transmission within Comanche food systems.

Chapter 1

Background: Food Knowledge, Knowledge Transmission, and Comanche History

Conversations are created around food. Family dinners, feasts of all sorts, or just two friends having dinner-- food brings people together. *Companion*, in French, means to share bread. Mary Douglas, who has long been at the forefront of Food Anthropology claims that food has always been important to cultures and it is a structure that impresses order on everyday life (Mary Douglas 1972). Economics and ideas grow out of interactions that are repeated until people develop these interactions that we know as “food ways” (Anderson 2005). Additionally, knowledge and culture expand from food ways that are created to both reflect and shape human experiences. Very few societies subsist on the same diets as 500 years ago, as humans add new food dependent on the importance of the accessibility and need for their food systems (Turner and Turner 2008). If how, or why, we eat changes dramatically and quickly over time, it tends to be in response to sociopolitical, economic, or environmental pressures that have negative outcomes on people’s health (Parrish et al 2007).

Consuming food becomes more about experiencing social factors than only a way of satisfying bodily needs (Miheuah 2017). If you think about it, how often are the food ways in your life determined by biology compared to culture? The thought of eating three square meals a day is a social construct about food. Add brunch to the mix, and you fit into someone’s cultural ideas of eating. How we eat is culturally important to how well connected we feel to our social groups. Choosing and consuming food is a means of intrapersonal communication because of the ability to create a cultural sense of belonging (Jane Dusselier 2009).

Similarly, food ways within indigenous groups of people in the United States are about more than just what we eat. Curiosity about Native food has a long history. First, colonial peoples needed native food knowledge to survive (Turner 2017). Once native food was understood or taken, the curiosity about Native food knowledge by colonists diminished. Many tribes were either removed from their homelands or put onto reservations which separated them

from many of their food sources. Jeff Corntassel and Cheryl Bryce write that being indigenous today means engaging in a struggle to reclaim one's relational place-based existence by challenging colonization, as a result of colonial encroachment onto homelands (Corntassel and Bryce 152).

It is important to point out Nancy Turner's and Katherine Turner's view that the term sovereignty conventionally refers to the sovereignty of the state over its territory and its right to impart policies without external interference (Turner and Turner 2008). Food sovereignty is having the control of decisions with respect to one's own food. It encompasses aspects of policy, politics, environmental justice, and water and land rights. Having sovereignty over your food does not only represent choice; at the root of food sovereignty is resistance. Natale Zappia points out that across Native America and First Nations communities, food justice efforts have coalesced around other equity and sovereignty issues, ranging from education and health care to treaty water rights and energy and economic development. Hidden in plain sight, these particular indigenous archives of food systems have much to teach those engaged in food justice issues as well as those attempting to rethink local, regional, and global environments (Zappia 2017). These forms of resistance pave the way for indigenous people to gravitate towards accomplishing issues around sovereignty. I would like to add that a non-physical, but equally valid form of resistance and resilience, is knowledge transmission, specifically of food knowledge.

In the 1970s, studies of knowledge of the environment, or ethnoscience, became a recognized field of anthropological research (Orr 2013). It is about this same time that the recognition of *Indigenous Knowledge (IK)* or *Traditional Ecological Knowledge (TEK)* became an important matter for Indigenous people. The challenges faced by categorizing this form of knowledge was that the context of how this knowledge was gained and transmitted was not within the parameters of western science. By excluding *IK* or *TEK* in conversations or accounts, it devalues the knowledge of Indigenous people. Fikret Berkes point out that it was not until the 1980's that the topic of *TEK* was becoming widespread (Berkes 1999). Since then, the

importance of *TEK* has become increasingly recognized in advancing hypothesis and enriching scientific knowledge in disciplines such as botany, ecology, zoology, entomology, forestry, and agriculture (Posey 1986). Historical evidence exists of the sustained productivity of indigenous systems, applied in some cases for hundreds of years on the same lands (Ellen et al. 2000). *TEK* goes beyond just simple facts. *Traditional Ecological Knowledge* is the basis of decision making in contemporary life. It could include natural resource management, education, health, community, and food preparation. Encompassed in *TEK*, and what *TEK* relies on is knowledge transmission.

Scholars such as Enrique Salmon and Michelle M. Jacob have discussed Indigenous forms of intergenerational knowledge in their works. Intergenerational knowledge is knowledge that is transmitted through generations by means of oral history, stories, and tangible learning experiences. The transmission of knowledge within indigenous groups has been impeded by acts of colonization and assimilation that have been purposefully ongoing since contact. “Such societal destruction includes a range of actions from deliberately destroying in acts of war to interfering with the transfer of food-related knowledge through generations” (Hoover 2017). For Comanches, this meant slaughtering bison by the hundreds and the tactical killing of our horse herds. Knowledge gaps in communities exist due to the onslaught of colonialism and ubiquity of colonial logics.

Most Indigenous knowledge is not written down. Our oral traditions are forms of historical texts (Salmon 2017). Our ways of knowing and epistemologies are translated through generations of transmission from elders to young children. Enrique Salmon mentions one of his Hopi participant’s ideas of passing on knowledge by keeping it alive through oral traditions and through its use (Salmon 2012). The knowledge is not stored in physical libraries; elders are our libraries. They manage this stored information and pass it on to the next generation. If this knowledge begins to be documented, then it is important to have ethnographic documentation done by indigenous people and in indigenous communities. The window is closing on some

indigenous oral information and creating written texts for the use of our indigenous people will help knowledge continue.

Doreen Fernandez's (2003) study puts food in perspective as a pedagogical gift that elicits memories, thoughts, and discussions of issues and topics not typically discussed within the culinary world (Doreen Fernandez 2003). Food in this sense encompasses the whole cultural package. How we eat connects us to the past with present concerns and future possibilities (Jane Dusselier 2009). Our Indigenous knowledge keeps us tied to what is happening around our food. Place, space, environment, and the health of our people is a good place to start when thinking about how we eat.

What has been missing from our foodways is the relational aspect between indigenous people--and in this thesis, Comanche people--to food. This is not entirely through fault of our own; the industrial food system operates under a settler-colonial mentality that sees food as a commodity (Katanski 2017). This leads to concerns about economy rather than health. As a minority group of people, we suffer. Diabetes was first documented among Native Americans in the mid-twentieth century (Weidman 2012). Today, at least 15% of Native people in the U.S. suffer from diabetes and 33% are obese (Centers for Disease Control 2017). This can be compared to blacks (12.7%), Hispanics (12.1%), Asians (8.0%), and whites (7.4%).

Not only does people's physical health suffer, but the health of our communities and culture also suffer. Embodied in our food are stories, language, place-based knowledge, interpersonal relationships, and outdoor activity. Place-based learning is central to indigenous methodologies and ways of teaching and suggests the land is always a procreative part of knowledge production (Grande 2015; Smith 2012). It is important to maintain food pedagogy within our communities. For example, youth education interventions by indigenous people in Canada (Bagelman 2018) have used decolonizing botanical texts, stories, and wild rice narratives (Katanski 2017), and there were likewise initiatives to revitalize food ways at Standing Rock

(Ruelle 2011). When we create paths for our people to follow, food becomes much more than following the next diet trend or cutting out carbs. We foster a relationship with food.

In contrast to the capitalistic mindset, indigenous food ways are shaped around relationships (Katanski 2017). These relationships are wrapped in storytelling that cultural knowledge is created, maintained, and transmitted from one generation to the next (Cajate 2010). These relational epistemologies are what led the Working Group on Indigenous Food Sovereignty to develop four principles of Food Sovereignty. I would like to focus on the first principle, which is the recognition that the right to food is sacred, and food sovereignty is achieved by upholding sacred responsibilities to nurture relationships with the land, plants, and animals that provide food (Hoover 2017).

Loss of traditional intergenerational knowledge transmission began around the time of the reservation era and intensified in the boarding school era when many families were separated. Boarding schools with imposed white structures contributed to the disassociation from tribal language, religion, and food ways (Miheusah 2017). A new generation of children lost memories of living with their parents and grandparents, and they gained new memories of mistreatment and assimilation. It is difficult to recover from emerging gaps even after one generation, which is problematic considering the only way to combat colonial logics that view indigenous ways of knowing as unimportant or even “vanished” depends on intergenerational teaching and learning through oral histories (Jacob 2012).

Yakama tribal member and anthropologist Michelle M. Jacob discusses in *Yakama Rising* how the land connects us to the creator’s original intention for our people, living, learning, and thriving on our homeland through recovering traditional practices and dismantling oppressive systems that harm our ways of living (Jacob 2012). Closing knowledge gaps relies on our new structures of teaching and learning. In Jacob’s fieldwork, she gives three examples of traditional dancing, language use, and food techniques that the Yakama people doing to demonstrate the tension between reclaiming traditional cultural practices and adapting to change. This form of

indigenous ways of knowing exemplifies ‘reverse anthropology’, the idea that indigenous modes of practice and analysis are treated as valid ways of understanding (Kirsch 2006). Our stories and teachings are valid, and they are instrumental to our revitalization efforts. Indigenous communities must draw from traditional and contemporary ways of reclaiming traditions to regenerate healthy communities (Jacob 2012).

The ethnographic techniques used by Michelle M. Jacobs align and overlap well with Enrique Salmons’s *Eating the Landscape*. Salmon focuses on resilience theories that help understand the source and role of change, in particular, the changes that are transforming, lead to adaptive systems, and are sustainable (Salmon 2012). The ideas around this change align well with indigenous worldviews. Salmon’s book used stories and anecdotes to create a foundation for resilience that exists in relation to external forces within human systems. Because indigenous people have faced dramatic social change, adapting to a new lifestyle is a dynamic and complex process (Jacob 2012). Salmon explains resilience in terms of *long-term memory* and *short-term memory*. *Long-term memory* is best explained in Salmon’s words:

One of the central constants of resilience is *long-term memory*. One way to categorize *long-term memory* is to think of it as either the old ways, traditions or ancestral knowledge; however, it is more accurate to think of *long-term memory* in terms of *conservation* and *release*. (Salmon 2012)

In terms of *conservation* and *release*, resilient systems go through periodic systems of stabilization and conservation. Knowledge that is conserved is like a recipe for cake; there is a basic knowledge that flour will always be included. This is stable. Our stability is elements of *long-term memory* found in our cultural histories and oral literature. Adaptations to cultural memory are like the adding layers to the cake. It creates social stratification and growth. As communities gather information about a place over time, successes are applied to planned ecological relationships. Our *long-term memory* creates adaptive cycles that lead to cultural resilience. Cultural resilience is where Salmon’s *short-term memory* can be introduced:

Some Native communities and tribes have learned how they were able to immediately adapt to survive external forces, which has newly organized cultural innovations. The new knowledge is *short-term memory*. *Short-term memory* best leads to cultural resilience, however, if it derives some of its foundation from *long-term memory*. (Salmon 2012)

Much like in Michelle Jacobs's *Yakama Rising*, people are creating new ways of cultural revitalization because of knowledge gaps. What is also important to resilience is language, stories, and narratives. Our language and how we speak about a topic reveals experiences with space and place and is shaped by our experiences with our environment. Language and cognition are embodied as a lived experiential structure. Our oral stories and narratives encode metaphors, cultural models, and other ways of talking about the land, supporting cultural diversity and resilience. Connecting our youth to what language, stories, and narrative experiences reveal is what is needed to challenging traditions while adhering to long term memory. In return, this creates *short-term memory loops* that forges stable innovation that creates *long-term memory*.

Stable innovation is formed when the connection to youth is made through elders. Teaching is what allows indigenous relationships to grow. Here, I would like to introduce two forms of memory that depend on teachings and lived experiences. *Implicit memory* is how we involve our experiences that may stall the creation of *short-term memory*. *Implicit memory* is:

A form of *long-term memory* that is acquired through previous experience that is used in tasks and activities in the absence of humans' conscious or intentional recollection of those experiences. (W. J. Perrig 2001)

Indigenous elders have lived experiences and therefore can act implicitly when *long-term memory* is associated with collecting or preparing food. However, Indigenous youth do not always have the ability to access or draw from our culture's *long-term memory*. That being said, our youth who are not learning form *long-term memory* may not have the ability to create resilient forms of *short-term memory* that prove to be something that can be done implicitly. An

individual who is riding a bike, and has been riding a bike for years, is not focusing on the fact of balancing the bike, but rather where the bike is going.

The problem is then that an indigenous community as a whole may not be experiencing “where the bike is going,” and instead needs to experience how to balance first. This experience starts with our youth and is in the form of *explicit memory*:

Explicit memory is the conscious, intentional recollection of factual information, previous experiences, and concepts. (Ullman 2004)

Because of settler colonialism disrupting traditional knowledge transmission and life ways in our Indigenous communities, our future generations do not have lived experiences like our elders did when they were younger. Explicit memory works in the form of teaching our youth who are not grounded in certain forms of knowledge or experiences like food systems. Some youth still experience teaching unconsciously in an *implicit* form, but for many of our youth we need to consciously teach culture as a lived experience.

The arrival of colonial powers, with European attitudes, had an immense and complex impact on the Comanches on the Southern Plains. The reservation era took a major toll on Comanche people as it was a time of genocide. Comanches were not idle people. Our time on the plains is what makes our food ways particularly interesting. We moved around in an area known as Comancheria, which encompassed areas in southern West Texas and Oklahoma through to Kansas and constituted our nomadic and raiding zones. We followed the bison, which provided a major component of dietary needs, but we still relied on collected and preserved plants and other game as a means of subsistence. We did not have any sedentary gardens, but rather used our knowledge of native plants on the plains or traded for food.

After being placed on reservations in the late 1800s, Comanches were forced to rely on inadequate rations of flour and sugar for sustenance, provided by the federal government (Mihsuah 2017). The rations sent were not nearly enough in quality or quantity to feed any human being.

In the 1930s, land was allotted to Comanches that lacked any potential for farming, and the Oklahoma Dust Bowl led to poor farming conditions. By being forcibly contained physically, psychologically, politically, and economically to small resource areas, the Kiowa, Comanche, and Apache were limited in their physical activities to specific localities and built environments (Weidman 2012). This likewise limited the available food resources similar to what many were used to. As such, allotments and land-ownership separated Comanche people from a lifestyle that we were accustomed to. Comanche people had to rely on government rations as a main source of subsistence.

Today, the vast majority of people do not have time or inclination to acquire food in the same way as in pre-reservation era. Rather, modern food preservation, processing and distribution networks provide a seemingly efficient alternative, promoted through billions of dollars spent on advertising 'fast food' products by transnational corporations each year. A large percentage of advertisements for low-quality foods, high in carbohydrates and fats, are specifically targeted at children; indigenous children and youths are as easily enticed by the candy, soft drinks, potato chips, macaroni and cheese as their non-indigenous counterparts.

Governmental food is still handed out by the Comanche Nation Food Distribution center administered by the Food Distribution Program on Indian Reservations. This federal program provides United States Department of Agriculture (USDA) foods to low-income households in designated areas of Oklahoma (United States Department of Agriculture 2019). These rations are known as 'commodities.' They are distributed to Comanche people who live in the five-county radius of the Kiowa-Comanche-Apache Reservation boundaries. The food distributed while I was growing up was most always contained in boxes. In these boxes and paper packages were "foods" like powdered milk and powdered eggs. Not a lot of it was fresh, healthy foods. Sometimes there would be a bag of apples and a bag of oranges. Bison was distributed at one point and time, and other foods that were more familiar were distributed as well. I did not

understand the concept of what commodity foods were, nor did I realize until elementary school that not everyone was eating this way.

In 2019, there are 17,000 members of the Comanche Nation. Of that 17,000, over 7,000 reside within the *reservation* boundaries. Recently, the Comanche National Museum and Cultural Center released information that there are less than 30 fluent speakers in the Comanche Nation, and of the 30, most are elders. The knowledge around food and many other topics that involve our culture are endangered along with our language as many older generations pass away. The time to ask questions is now.

Chapter 2: Methodology

As a researcher, my work was conducted through the lens of an academic ethnographer and as a Comanche male. As a researcher, it is important to write about a subject that most people in my tribe do not often write about. This knowledge was gathered during interviews conducted by the me, the researcher, in a qualitative ethnographic study that has been approved by first and foremost, The Comanche Nation Chairman, and secondly, The University of Oklahoma Internal Review Board (IRB number 9953).

There are no specific *taboos* as to why individuals do not write about food. Perhaps we take this knowledge or how it is communicated for granted. Yet, I think this should be recorded in a different way. There are certain topics in which members from the Comanche Nation are experts in and are in fields that need attention, but written recordings of this knowledge are not often done by Comanche people. Food is not a topic that is discussed widely, but there are people that are considered experts or most knowledgeable on plants, food, and game.

As a member of the Comanche Nation, I would like to acknowledge that this paper does come from an emic viewpoint. I am from the area of the Kiowa-Comanche-Apache reservation, and my family is from there as well. In this paper I am working with people that I relate to as a grandson and nephew. I also would like to acknowledge that being Comanche means that I am biased towards a certain framework of knowledge.

My framework can be best described through values of community, respect, accountability, and resilience. Community protocols require that I do not only speak to one individual for information. It involves multiple people's perspectives and worldviews. Respect comes understanding refusals or the space people need to best communicate. Resilience is not just a framework of my paper, but it also means that the people in my community are still find it important to work with new generations to teach them about our Comanche ways of living and being. Finally, in terms of accountability, I have a responsibility to the people in my community to be truthful, and that the work I am doing is first and foremost for the benefit and use of

Comanche people. Indigenous ways of examining and conducting research demands reciprocity and respect for the people I am working with. I also believe that it goes against the grain of conventional anthropological methods and ideologies that say I cannot become my research. It disrupts the idea to be unobtrusive and acknowledges that I am from that environment.

When beginning my field work, I consulted with some elders in my community. I asked if this was a good direction to go and where to begin my work. I began with ethnographies and ethnobotany reports on Indigenous foods, specifically *Comanche Ethnography, Some Notes on Comanches*, and *Native American Food Plants of Southwest Peoples* written on Comanche people from an external perspective. I used these publications as a starting point for interview questions, and also as a starting point to know where our stories need to begin being told. We deserve to be the people telling our own stories and for ourselves.

Growing up in Lawton, OK and the community of the Comanche Nation, I think it is fair to say that I have conducted participant observation for my entire life. I have witnessed how people approach, or do not approach, subjects like this topic. My first-hand experience comes from being taught from elders and peers. We share knowledge in a way that the learners first observe and listen to what is being taught.

In my interviews, I sat down with three elders in the community and three adults-- between the ages of 18-60. Of these six individuals, only one was male. The interviews conducted lasted an hour to two on average, and they were conducted in English. These six people I interviewed were all recommended by others to speak on behalf of Comanche plant use and food techniques. I read them names of plants and showed them pictures of plants to see if they could identify the plant themselves. I often asked open-endedly if they could share their experience with these plants. Other food preparation techniques were discussed in our interviews as well as how this knowledge is transmitted.

Throughout this thesis, narratives and anecdotes of elders and members of my community are provided to tell their perspective and what it means to my research. I have

compared these narratives to the modes of memory stabilizations are being formed, based off of Enrique Salmon's model of *long-term* and *short-term memory*. I find Salmon's model very valuable, but it is focused on already established forms of knowledge transmission within Indigenous communities. I chose to add *implicit* and *explicit memory* to the conversation so that my Comanche community can better understand why we need to explicitly transmit knowledge to our youth.

Chapter 3: Interviews

For Comanche people, we have a long history of living on the land around Lawton, Oklahoma. It is special to us. I currently live 80 miles away from this place. On my drive home there is an anticipation that builds up. The anticipation is not nervousness, but it's the awareness of good feelings that being home brings to me. I cross the arbitrary boundary that says, "Now entering Kiowa-Comanche-Apache Reservation," and shortly after crossing this line, I see the Wichita Mountains. The feeling of pride that bolsters from the heart is finally reconnected, and I feel that someone or something there has been waiting to see me come back home.

Rita Wahnee

A year ago, I would have went home and always had time to go see my grandma Rita Wahnee. Our relationship as grandma and grandson is recognized by the marker, "that way like that." She took me in as her grandson some years ago because of the respect and care that we had for each other. She also pointed out after the fact that her dad was half-brothers with my great grandfather, and in this way, we are connected in relations again. She was 78 when she passed away in 2018. She taught me many things about our Comanche people, crafts, and she shared many of her stories about her life. It was always good to hear and learn.

One day, we were sitting together at her dining table-work station, and her Comanche Nation elder lunch was delivered to the door. I answered the door and grabbed the Styrofoam meal container, so she didn't have to stop working. She opened the container and yelled out a classic "Ubia! I never eat those damn, nasty, lunches. They never try to serve anything good for us." Inside was a hot dog on top of a piece of white bread, a serving of beans, and a plastic container of peaches. I was taken aback at what our elders were being served. It was prison food! I, a growing boy, still ate the meal, but it was that day that I wanted to learn more about what we can do to improve the quality of what we Comanches eat.

As she got older, my grandma Rita always had moments where she was getting the "shakes." This can be compared to when she was a young child when she never remembered

getting sick, cold, or hungry. She grew up in a tent on East Cache Creek, near where the Comanche Casino now stands. She was born in 1940, and by 1946 she was taken to Fort Sill Indian School. Before then, her and her family lived off of the land for sustenance. They butchered cows, collected drinking water from local springs, and ate fruits and vegetables that grew near their camp. Family friends used to always come around their camp, and they would stay for weeks at a time. Everybody would be able to eat, and they would always be able to collect more food. That is the way it used to be.

The day I went to talk to her about food and plants her house was loud and quiet all at the same time. It was very quiet because she lived on the edge of town, and the neighborhood nearby wasn't always too loud at night. This place is where her family moved to after living near East Cache Creek, and this is where her family still lives. Walking up to her front door was a walkway where someone had written in wet concrete "Wahnee."

Inside her house, she was sitting under one of the only lamps that was on, beading a cross for someone. The television was loud as could be, but it always was, so it wasn't anything that was out of the normal. When I walked in, she called me by her name for me, turned the television off, and said "let's talk!"

Before our conversation began, she had to fill me in with stories that I have missed while I have been away. Then we began talking about *paruasukui* (plums). In the ripe season, late in the summers, plums are very plentiful and grow on many allotments and "Indian land." Rita recalled picking plums with her mom and enjoying them after making *suukui kootsapu*, a preservation process that makes plum jelly. She also mentioned the same for *naskeeka huupi?a* (persimmon trees) that are ripe in the fall. "We canned everything, and in the summers, that kitchen would be so hot from mom boiling and sterilizing the jars." I asked how to do this, and she couldn't remember at the time, and she didn't know who taught them. She said it could not have been Anglos, because there were none around while she was growing up. For storing jams and jelly, she said the same process was used in sterilizing, but when cooking the fruit down into

a correct consistency, you had to pour the jelly into the jar while it was still hot in order to help seal it. Her family needed a cool, dry place to store these preserves, so they built a dirt dug out that resembled a storm cellar. In this dug out they would store the canned food for the winter. They canned *nakseekaʔa* (persimmons), *amawoʔa* (apples), and even made watermelon jelly.

Boy, they liked their *tsiira* [chili peppers], I'll tell you what. They would make that salsa, and always save the seeds for next time. We saved those [pepper seeds], *woʔnabina* [cantaloupe] seeds, *puhibina* [watermelon] seeds. When my dad was living, he had a bucket when we had plums, and he would say "You kids! When you get done, you put them in here!" They never planted anything. We would just throw them, and the creek would take care of them. (Wahnee 2018)

They cared for this place as anybody would their own home, and she thinks they knew that it would take care of them in return. This could be said about Comanche knowledge transmission in the same way. She said, "The way knowledge is transmitted is that our elders put all of their knowledge in a bucket. When my grandsons and granddaughters begin to pick it [language and cultural ways] up that we [elders] begin tossing out seeds. There is an intentional growth that I expect to happen. When it does, it takes care of us elders in return" (Wahnee 2018).

There is something special to say about *nakutabaʔi* (pecans) and Comanche people. The use of pecans and other nuts has always been around; we recognized the sustenance that the pecan provides and used that in our meals. We ground them up, and used them with our dried meat—*taʔoo*, or even in *turahyapu* (Comanche meatballs). That has always been around, but more recently in the past 100 years it has changed. Pecans have been used to teach lessons, make money, and still give sustenance.

"I had to have been about that size, up there in that picture. That's me with my mother and grandpa. When they would all go down to the creek, they would load up in a wagon, maybe two wagons. They would leave me under a tree. Maybe they weren't that far. I didn't mind, but they would tell me 'Stay here now. Don't go

nowhere.’ They would all be flailing and laughing and talking. I guess when uncle Willie got done [talking], they would all get quiet-- when they were picking. That’s when you would become one with nature. The trees, they talk to one another. Sitting that young, I remember so vividly, all the sounds and the flowers moving like they were talking or something. I do remember that so vividly. Then all of a sudden, here everyone comes—talking and laughing. I swear my mother had a blanket full of food because it seemed like she would go [makes whipping sound], and it would be all on there. They would have meat, boiled potatoes, potted meat, crackers, frybread—they had it all. Then we would eat, and all get back to picking. I loved that little creek” (Wahnee 2018).

She was quiet for a little while after she told this story. I could see her thinking and reminiscing on that memory, and she was so content. It made me think about all the occasions that my paternal grandfather would share time with my sister and me. I can still remember him climbing up a tree to shake off as many pecans as possible. Whether it was in the creek off of 4 Mile Road or picking pecans from the side of our house in Lawton, I always enjoyed those days. We always shelled them at the end of the day. My grandma would cook dinner, and afterwards we always shared that time to shell pecans. I think my grandfather sold a lot of them, but there was always a Ziploc bag sent home with my sister and me.

It may be difficult for some to look at a pecan, and spark up so many memories, but that is what the pecan contains. The pecan itself is a way to pass on long term memory. When we crack any pecan open, it creates a spark that generations before us could feel. Five generations ago, my ancestors would collect pecans as sustenance, and that pecan gave the knowledge of sustenance. Two generations ago, a pecan gave the knowledge of sustenance in the form of monetary needs. Many people would collect pecans to sell. They even figured out that wet pecans weighed more, and therefore they would provide more profit. Now for my generation, the pecan teaches community and kinship. Like I mentioned, my grandfather would take my sister

and pecan picking. He may have sold some, but the time spent collecting pecans was more about being with my sister and me. He was instilling in us forms of long-term knowledge the entire time but created *short-term memory* loops in the process. Now when I see a pecan, generations of memories flood my mind.

One thing that may stand in the way of collecting food items is the access to wild plants. The Wichita Wildlife Refuge is one place that we used to have access to, and was not under the control of any government entity. However, in 1901, this area was set aside from the Kiowa-Comanche-Apache Reservation and was administered by the National Forest Service. One of our major food sources, the bison, was nearly extinct from settlers and hunters marauding of the mammal. Fifteen bison were reintroduced to the area by 1907, and my great-great-great grandfather was there to see them off the train.

What the making of the Wichita Wildlife Refuge left was the separation of our food ways. Ft. Sill, which was created to imprison Kiowa, Comanche, and Apache people was also a major part of separation from our ways of life. Many of our people would collect from the abundance that the Fort Sill area had to offer in the creeks, streams, and trees. My grandma Rita remembered when she could no longer do this.

“I would take mama out there by Fletcher. Way out there in the country. We would just ride around, and she would say, ‘There it is! There it is!’ On Fort Sill, you know like going to that lake [Lake L.E.T.R.A.]. My sister would say, ‘we need to stop and get some of that tea!’ We were afraid to because we were worried that they would take us to jail. That’s where I seen it last. They have maroon, purple tops. Bushy little tops that resemble cat tails.” (Wahnee 2018)

On Ft. Sill and private land in the Wichita Mountains are pieces of sacred sites and land. One of the most important in the area is Medicine Bluff located on Ft. Sill. This Bluff is located on the south side of medicine creek and rises up to 310 feet. This is a place of power for Comanche people. Still today, we have to be granted permission by Ft. Sill, and have to give

them a good reason to collect or be at these sites. This limits how and where we collect our food items. Due to conservation and military efforts, do we really have a right to collect on this land?

Carney Saupitty, Jr.

I have known Carney Saupitty, Jr. since 2012, and what started as coworker relationship transformed into a friendship. Carney and I have worked together on many projects at the Comanche National Museum and Cultural Center (CNMCC) in Lawton, Oklahoma. Most projects at CNMCC have been centered around his fluent knowledge of Comanche language and my knowledge of how to write the language. His family has known my family for quite some time, so from the moment we met we were able to connect through our relations.

We began discussing plants and food we eat. The first discussion about Comanches and food should be centered around our bands of people. When recognizing and acknowledging where we are from it often includes our bands. My people are of two bands from my paternal side: *Kwaharuu* (female antelope, the Antelope Band of Comanches) and *Yapairuka* (root eaters, the Root Eaters Band of Comanches). Out of all the bands within the Comanche Tribe, seven are described and named by what they eat while the others are described by other social relations. The names for these bands of Comanches tell where each one lived and traveled around. For instance, *Kwaharuu* band of Comanches lived in the pan handle of Texas where antelope are known to be. This word association is because our expanse across the Southern Plains was so vast that we all sustained ourselves with different food sources. Our language is a descriptive language, and in it, tells a lot about why we lived the way we did.

What Carney deemed important to share with me first was the terms around butchering and also some roots. He shared stories and anecdotes of gathering plants for food and medicine with his father, but he decided that he wants to keep that between him and me for the time being. His refusal to share this is very important to understand in ethnographic works and is the reason why indigenous people should work with indigenous people when the subject matter switches to

personal accounts. He wanted to focus more on butchering and correcting words from Carlson and Jones. Here is his story about butchering:

It was when Comanche's began living on a reservation area. We didn't have access to bison like we used to, and instead we had access to cattle. Now, bison had healthy, natural diets living on the plains. Cattle, however, were being fed whatever the [local] farmers gave them. One elder was telling me about a time they were butchering, and it must have been what the cows were eating, because when they pulled out the *kwitats* [intestines], man it stunk! (Saupitty 2017)

Nahmia is the word for October. The word describes rutting season. This also means good hunting season. The word for cowhide is *Tuuba?taama*, which is in reference to scalping: *tuubapi*. When butchering, the rump and the brisket were cut into one piece with large animals. Comanches used every part of the bison or cow, and bones were used as digging tools called *pooro*. The word *pooro* is in reference to how animals may dig with their nose. We used this *pooro* when digging for roots and potatoes, such as *yapai tuurunu* or *suhutsitsinuu* (wild potatoes) and *paayap* (water tubers). It is also important to note that Comanche families ate together. The people would be in a circle, and the food would be in the middle. Everyone would eat with their hands (Saupitty 2017).

Individuals still eat in a circle, and with their hands, but when they do this, it is in a Peyote meeting. During these nights, Comanche men are awake all night in a tipi, and they typically only leave to use the restroom. I will not speak too much on what happens inside of the tipi because this paper is not the appropriate place, nor do I have the knowledge that it deserves. However, I will talk about the food, as it is an important factor. The consumption of peyote results in a very high alkaline intake. The first thing that these peyote men eat is necessary to balance out their pH levels. What better than to serve than dried meat and nuts that are high in protein. One of the major foods in the church is *ta?oo*. As I mentioned earlier in this paper, *ta?oo*

is a dried meat that is typically only eaten at Native American Church meetings because like my grandma Rita put it, it is the original food:

You would Kuinanu [slice the meat thin]. Then mom would hang it on a string and hang it out there [in the backyard]. Before that step, she would take that cheese cloth and put the meat in it to hang. The cheese cloth would keep the flies off. [Now] they eat it in the Peyote meetings because that was the original food. It was pounded after it is dried, so that they could carry it in the old days. (Rita Wahnee 2018)

Roxie Kerchee

I spoke with another member of the Comanche Nation about the food eaten in the Native American Church, Roxie Kerchee. Roxie was raised around the Mt. Scott Comanche Community, and has lived in the area of Lawton for a good part of her life. What I find very interesting is that the food eaten in the morning, after the service, is typically the only time people eat this way. Comanche people do not currently dry meat and eat it on a daily basis. Yet, the Comanche Native American Church chapters are retaining this practice?

The main breakfast items that are served are *ta?oo* and blue corn meal. These two food items require hours of preparation. The corn takes a very long time to cook because it has to be very soft. The preparation is important because it has to be appropriate for everyone to eat. Feeding everyone during peyote services means that the preparator has to make sure even the most elderly of people can eat. For a long time, it was hard to get a hold of the blue corn that we needed for ceremony. We used to have to drive all the way to the city to buy it. Now, it is served in commodities, and a lot of people know that it is needed in the church, so they donate it whenever they can. (Roxie Kerchee 2019)

The accessibility of foods, which includes the cost, proximity, and availability, makes this harder for people to acquire these items. Still, the community at large does their best to take

care of the church. During a Native American Church Meeting, you can almost count on serving 30-40 people. The cost of meat is a huge factor that makes serving food difficult. To ease this, people will make monetary donations, or depending on the time of year, people will donate meat. The church could then serve deer, elk, bison, or beef.

Another factor that makes serving numerous amounts of people difficult is that drying the meat for *taʔoo* will shrink it. To make it go further, Roxie adds crushed pecans or crackers, to the bag of *taʔoo*. Adding fat may also make the meat stretch, but it also adds tons of flavor. This is the way we did it a long time ago, and the same may go for the blue corn meal.

Because of the situation we have been put in by settlers, we often have to find ways of adaptation and resilience when creating our foods. Creating our *original food* requires the long-term thought and knowledge of both what that food is and the means to prepare it. This long-term knowledge is passed down through generations and stays constant. The short-term knowledge of food preparation is what changes through adaptation and the resilience of what it takes to keep the knowledge available for future generations.

Some of our elders still hold our long-term knowledge. An example is the way my grandma Rita described making the *taʔoo*. This is how it has been done for a very long time, but even so, using cheese cloth to keep off the flies is an example of *short-term memory* that was created into *long-term memory*. A short-term adaptation being used now is dehydrating the thinly sliced meat. Dehydrating the meat is a way of making *taʔoo* year-round. The person preparing this does not have to worry about conditions outside or the time of year.

Roxie grew up learning from her great grandmother, and since then, everything she has been taught is from a matriarch. In this way, there is only certain information around the church that she can speak about. She began carrying responsibilities around the age of eleven, and the first food she had to prepare by herself was the blue corn meal. She was taught the *long-term memory* way of cooking our food, which is how my grandma Rita explained making *taʔoo*, but today she has adapted to this *short-term memory* way of dehydrating the meat.

The question is, when Roxie adapts to modes of *short-term memory* modes, does the food prepared lose its way of being Comanche? As she creates new, *short-term memory* loops, she keeps a piece of the *long-term memory*. We have to remember that this is not proving inauthenticity. In other words, “our specific family members may change, but the food and the land where our items grow remain the same source of cultural memory and this collective memory more accurately reflects our family and culture at the moment” (Enrique Salmon 9).

How Roxie Kerchee cares for this food is exemplifies a resilient system. The form of preparing food for the Native American Church, and teaching her daughter, is creating a periodic phase of stabilization. This transition exemplifies cultural growth in that, consciously or unconsciously, Roxie is taking the success of the past form of creating food and applying it to current adaptive forms. Through this process she is also teaching her daughter: “My daughter is still very young, and not old enough to carry responsibilities just yet, but she helps in any way she can. I’ll give her little tasks, just the way I did when I was young, and I share stories with her while we cook.” In this way her daughter will grow up having the knowledge of our food ways and have to ability to support cooking our original foods.

The Comanche Nation started the Native American Church. While other tribal nations practice this same religion, it means that continuing the transmission of our knowledge is the responsibility of Comanches. The way our Comanche men lead the church services and how our matriarchs prepare our food really cannot be learned from anyone other than Comanches.

Roxie mentioned that there are only about seven Comanche men that lead church services within Comanche chapters, and there are only three chapters within the Comanche Native American Church. When Native American Church services are held, there is always someone preparing food all night while the men in the tipi pray. The food is typically prepared by the family, an effort led by the matriarchs. Considering this, the knowledge around making our “original food” is only with our elders and Native American Church matriarchs. Our matriarchs

in the church are doing their best to keep our original food the same, but it is only passed on within certain families.

However, the fact that the knowledge of original food preparation is held by a handful of matriarchs? is a threat to our continued food ways. Every elder that I have spoken with has mentioned eating and preparing *ta?oo*. They have this knowledge as well as matriarchs of the church, but is it for everyone? Roxie mentions that eating our original food would be much healthier for us than the processed foods we get, but most people think that food eaten at Native American Church meetings is only allowed in that context. This pushes Comanche people further away from the continuation of knowledge transmission. Another threatening factor is that Comanche people are not seeking out this knowledge. It could be that they do not generally worry about this topic or that they do not know who to seek out. When I started this research, I only knew a few people with this kind of knowledge, and the number of people to seek out is diminishing. The last generation of elders who experienced the *long-term memory* I speak about in this paper is leaving us.

Chapter 4: Why Modes of Memory Stabilization Matters

According to Enrique Salmon's modes of resilience, *long-term memory* and *short-term memory* are factors that I have included in this paper in the same form as they are portrayed in *Eating the Landscape*. Here, I would like to discuss two forms of *long-term memory* that are not mentioned in his work: *implicit* and *explicit* memory. In Salmon's writings, there are already established forms of purposeful knowledge transmission, but what is needed for the Comanche community is more explicit *long-term memory* transmission. As a theoretical term, *implicit memory* refers to previous experience that is used in tasks and activities in the absence of humans' conscious or intentional recollection of those experiences (W. J. Perrig 2002), and *explicit memory* is the conscious, intentional recollection of factual information, previous experiences, and concepts (Ullman 2004).

When speaking about implicit memory in terms of how we perform our everyday tasks, implicit memory does not require conscious thought. Our memory and actions use a mechanical form of thinking that does not require thought. Thus, our actions require less *short-term memory*. Implicit memory is less transformative and adaptive, and it does not always help us understand the source of change.

In terms of our Comanche food ways, we are partially leaning on forms of implicit memory for transmitting knowledge. For example, pecans currently hold a form of *long-term memory* and *short-term memory*. My grandpa made sure that my sister and I had the experience of collecting pecans because it meant spending time with us and collecting pecans was something that he had done his whole life. Collecting pecans for the sake of spending time with us created *short-term memory loops*, but he was still adhering to *long-term memory loops*. While he was adhering to *long-term memory*, he was implicitly showing us our foodways. He passed away in 2009, and since then, there has not been much of my family collecting pecans. The trees on our land have not produced in quite some time, and I think that is because we have not spent

the time reaffirming our need to the trees. While I am fortunate to have experienced this with him, he passed before many of my younger cousins had the opportunity to do the same. New generations are not experiencing new adaptive ways of using pecans and therefore they do not collect them, which is only creating more intergenerational knowledge gaps.

If people are collecting pecans, it is not always happening with the conscious goal of transmitting long-term knowledge or creating short-term knowledge. This is one way we are losing our forms of resilience and adaptation. Implicit memory is primed by experience. An individual may have a general idea of the use of pecans, or other plants, but not seeking knowledge on how the use of these is impeding *short-term memory*. So here, rather than selling pecans or using the collection of them as a tether to community and family growth, an individual may mechanically pick up a pecan, crack it, and eat it. If that is it, we are not reaffirming the implications of *long-term memory* or the actions of *short-term memory*. As indigenous people, reciprocity is important to our cultural values and communities. By practicing our food ways with the intention of adhering to *long-term memory* and creating *short-term memory* loops in the process, we are reaffirming our need to each other in the community and to our food.

As a community, I think we need to begin relying on forms of explicit memory. Implicit memory and explicit memory can be created and reinforced simultaneously. For example, Roxie has her daughter in the kitchen with her while she prepares food for a Native American Church meeting, during which her daughter implicitly learns by experiencing the preparation first-hand. At the same time, Roxie is explicitly creating ways for her daughter to learn. Not all of our Comanche youth have this opportunity to have knowledge explicitly transmitted to them. Modes of *explicit memory* may be our opportunity to understand what our forms of knowledge transmission needs. Our communities can work towards purposefully teaching younger generations and the importance of knowledge transmission through explicitly recalling our *long-term memory modes*.

If we began creating outlets for younger Comanche generations to learn, then we began forms of explicitly teaching the *long-term* memory modes that Comanche people have been adhering to for generations. Our youth can then restart the memory modes that may have missed an entire generation, and begin to create new, *short-term memory loops* that turn into modes of *long-term memory*.

The Comanche Nation offers outlets of education through programs that are filtered through the Tribal Historic Preservation Office and Higher Education departments. These Departments are doing their best to teach our culture explicitly. Martina Callahan is the Tribal Historic Preservation Officer at the THPO office and oversees services such as public forums to enhance the knowledge of the Comanche Nation and the general public, conduct research on land records and maps of cultural sites, and investigate legal issues concerning cultural resources. Also, Ruth Toahty is a very valuable THPO resource. Ruth is an elder in our community that is very knowledgeable in the collection of plants for food and medicine. She shared with me that her family still goes picking blackberries and other plants. During this time, she takes people that do not typically have the opportunity to learn about plants used by Comanche people. She also mentioned the importance of paying respect to what we harvest by acknowledging the plant. “Those little apples [*tʰeʔamowoo*] don’t always produce, and we have to acknowledge them by yelling out ‘*tʰeʔamowoo*’ when picking them, so that they will grow more the next year. We [Comanche people] also leave behind a black tie made from knotting strips of cloth, and we say a prayer. This gives thanks to the plant, but we also know where we collected from” (Ruth Toahty 2019). As mentioned previously in this thesis, it is important to acknowledge our plants and food in this way. We need to give the same respect to our elders that we want to learn about our Comanche ways and acknowledge our need to them by asking questions.

Martina Callahan and Ruth Toahty are currently working towards creating an ethnobotany of plants with Comanche uses. In March 2019, they held a public forum that was

centered around the traditional plants and food of the Comanche people. This forum was one in a series of Comanche tribal forums for a “cultural properties” ethnographic study. The THPO was awarded the MICA group grant that provides communities with the opportunity to establish support systems that protect sacred and cultural places. The forum was well-received within the community, and from it, the THPO hopes to gain support in conducting their future research. Since early 2019, I have been working on producing a collective Comanche ethnobotany of all the resources I have had access to. I have been working with Ruth on this, and I hope that this helps their efforts as well. You can find this in the appendix of this thesis.

Catherine Parker is the Director of the Comanche Nation Higher Education Program in Lawton, OK. The Comanche Nation Higher Education Program serves Comanche people seeking assistance through college scholarships, job placement and training, and adult education programs such as GED classes, elder computer classes and career development classes. They also seek to assist students in K-12 programs through after-school tutoring, and more recently, S.T.E.A.M. camps. The S.T.E.A.M. (science, technology, engineering, art, and math) camps are offered during every spring, summer, and fall break, and the classes that K-12 students attend are always changing. Students are offered the opportunity to experience a classroom setting that incorporates their own culture, like the use of plants as medicine. This is important to the transmission of knowledge to our youth because it is not taught in public schools and rarely accepted. Catharine Parker explained that “Lawton Public Schools appreciates that we take the time to teach our students how to incorporate our culture and medicine into classes, but they said that they don’t want the students to think of it as real medicine or to use our methods rather than real medicine.” This is the thought of many institutions that do not fully accept our traditional ecological knowledge as valid.

During the 2018 summer, Comanche youth had the opportunity to work with plants. What Catharine Parker wants student to realize is that our ancestors were scientists. Comanches on the Southern Plains made observations about what animals eat and what plants to collect for

medicine, teas, and sustenance. Catherine Parker was given this knowledge of plants from her grandmother which she passes on in the S.T.E.A.M. camps. “By far, the student’s favorite class was on plants and medicine. It created ties between the tangible and intangible objects that we can create from. When they were creating medicine bundles, they felt that they were doing something important and they could take this home for the people in their families.”

The Higher Education S.T.E.A.M. camps went from experiencing tangible knowledge to revealing the intangible aspects of plants. “Our students went into our lab and they were able to learn about DNA. They all had the opportunity to extract strands of DNA from a strawberry. From the extraction, the students then took the DNA sequences and were able to determine the species and the location that the strawberries were grown” (Catherine Parker 2019). In these classes they gained new short-term knowledge on how plants can be identified and understood.

Similar to narratives and anecdotes of *Yakima Rising*, our Comanche students experienced what long-term knowledge is. This may have been the first time learning about medicines and plants as sustenance, but these are the types of interactions with elders that is happening in other communities, like the Yakama Nation, that is working. Settings like this are not only a form of classroom learning. Learning about S.T.E.A.M. subjects through our own Comanche lens becomes a political act that is truly needed right now. Every time one of the students makes a tea, picks a fruit, or uses our medicine, they are creating a connection with generations before them and affirming the need for our food ways for generations to come. Because all of these items come from the land, they are also reaffirming the need for these plants to the earth. Our food ways and plant knowledge ask for this land to remain intact.

Conclusion

Narratives like my grandma Rita's are not rare or some hidden gem in Comanche Country. Several individuals and families can connect to a pecan narrative or eating *ta?oo*, but in my research I wanted to talk with elders and other tribal members in my community about what is still being collected or prepared, and if this knowledge is being transmitted to other members of the community.

A question that I ask myself is throughout this research is, when does is the transmission of knowledge, in terms of Enrique Salmon's theory of *long-term* and *short-term memory* loops, begin to lose pieces of *long-term memory*? Does it all completely stay within the community? Through my research, there are a couple of answers that I have been taught. Our *short-term memory* loops are fighting to be created within our Comanche Nation. There are individuals and groups like Ruth Toahty, Carney Saupitty Jr., Roxie Kerchee, Comanche Nation Higher Education and Tribal Historic Preservation Office that are attempting to inspire others to create *short-term memory* loops. These forms of loops are what is crucial to the continuation of knowledge transmission and our ways understanding how generations before us had to show resilience and adaptation, and they are crucial to how we continue to adapt and show resilience for generations to come.

The knowledge passed on to me by my grandma Rita and Carney Saupitty Jr. of plants and edible fruits that are collected is *long-term memory*. Within this are narratives and stories of collecting that even I can remember as a child and that I feel that I can connect to all my relations with. Roxie Kerchee and Ruth Toahty experience *long-term memory* when they prepare our "original food." The experience that they have doing this connects them to all their relations before them, and when they prepare this food, it is like 500 years of hands cutting, pounding, and serving this meat. These physical forms of *long-term memory* are only going to continue to be around as people as long as people keep created *short-term memory* loops that the next generation can pick up and relate to.

There are all these physical attributes to the importance of *long-term memory*. There are also the metaphysical attributes that are encapsulated in this form of memory. That is prayer. When preparing *taʔoo*, our *short-term memory* loops are creating new uses of beef instead of hunted game. Instead of waiting for the right weather to dry meat, some use dehydrators that can be used year-round. When we collect plants, we may find them in different places or find new uses for them. One thing that perseveres and demands our *long-term memory* is prayer. Roxie may not be preparing food the same way that two generations before her did, but she still prays while she does it. Preparing this is food is a responsibility to feed people of the church, but also a responsibility to keep it a ceremony. She prays so that the food may help the men who prayed for their relatives and our people all night. She thinks good things around this food because it is going to transfer to people who are asking good things of our creator.

When Ruth collects food, she prays for it, and always leaves behind a black tie. This land that we collect from is giving to us long-term knowledge. It is giving us sustenance that it gave to our people long ago. The land is giving us life and is allowing us the space to continue being Comanche, so that generations to come can feel that same life and appreciation. When we collect from the land, so that we can teach others, we pay respect to it so that the ones we teach can return and find it plentiful.

Without seeking this knowledge, our food ways will not be around much longer. This loss will include the language around it, the places we know where to collect from, and the spaces for community togetherness that knowledge asks of us to be a part of. Thus, the need for active forms of transmitting explicit *long-term memory*. We can see forms of explicit *long-term memory* in cases such as the Comanche Nation Higher Education Program and Tribal Historic Preservation Offices.

There are limitations to this research. Namely, I interviewed individuals that I knew as people who could speak on this subject, as they were recommended by others in the community. However, there may be a handful more of people that understand this subject well.

We are in a hopeful position for the continuance of our Comanche food ways, but there is only a small window to continue transmitting knowledge. This thesis has been a look into the foods and knowledge that is still shared among the Comanche Nation. I hope that this thesis will become a modest contribution to the Comanche Nations efforts to continuing our food ways and how we transmit knowledge to one another. I also hope to have contributed to the language around the plants that Comanche people collect and that relationships continue to form around this subject.

Appendix

During my work with Carney Saupitty and Ruth Toahty, I began compiling a list of plants that are used by Comanche people for food. This Comanche Ethnobotany is a bit different than other before it because it does not include plants as medicine. I chose to not include this because I believe our medicine deserves its own research and I am not a person who knows how to use medicine in that way. The way of knowing how to use medicine needs to be taught, and it is not something to try to learn on one's own.

The plants list I am working on seems to always be growing. The plant list below is a copy of what we have pulled together thus far.

Comanche Name	Scientific Name	Common Name	Food Use	Plant Parts Used
Ekawaapi	<i>Juniperus virginiana</i> L.	Eastern Red Cedar	Fruits are eaten fresh or cooked	Cone, Wood, Leaf, Branchlets
Tæ?tataatæ Kæka/ Pæwatsi/ Kæka/ Kæhtsutsæ?ni	<i>Allium canadense</i>	Wild onion	Large onions roasted, braided, an roasted over fire	Bulb
Tæmæya	<i>Rhus glabra</i> L.	Smooth sumac	Fruits eaten raw	Fruit, root, leaf
Siiko/ Sikoo	<i>Camassia scilloides</i> (Raf) Cory.	Atlantic camas	Raw roots eaten	Bulb
Siiko/ Sikoo	<i>Camassia esculenta</i> (Ker.) Robinson	Wild Hyacinth; Camass	Raw roots eaten	Bulb
	<i>Yucca</i> sp.	Yucca	Yes	Fruit
Atabitsænoi	<i>Liatris punctata</i> Hook.	Dotted blazing star	Chewed raw for juice	Corm
Wokwesi	<i>Opuntia</i> sp.	Prickly Pear	Eaten raw or dried after removing the seeds. Fruits are knocked off the cactus with a stick and rolled onto the ground to remove spines. Spines also removed over a flame.	Fruit, Spine, Sap, Stem (pads)
Mitsonaa	<i>Celtis laevigata</i> Willd.	Southern Hackberry Sugarberry	Fruits beaten to a pulp, mixed with fat, rolled into balls and roasted	Fruit
Naseeka	<i>Diospyros Virginiana</i> L.	Common Persimmon	Fruits are eaten fresh or dried. It was not uncommon for this fruit to be bet to a pulp, have the seeds removed, and dried. Cakes were formed, and later softened for various ways of eating	Fruit
Tunaseeka	<i>Brayodendron texanum</i> (Scheele)	Mexican Persimmon	Fruits are eaten fresh or dried	Fruit
	<i>Dalea purpurea</i> Vent.	Purple prairie clover	Yes	Root
Puhihubi	<i>Lespedeza capitata</i> Michx.	Roundhead Lespedeza	Leaves of this plant were boiled in water to make a tea	Leaf

Ekaʔkoni	Pediomelum Hypogaeum (Nutt. Ex. Torr. & Gray) Rydb	Subterranean Indian Breadroot	Yes	Root
Ahwepu	Pomaria jamesii (Torr. & Gray) Walp	James' Holdback	Raw or boiled; used for food	Tuber
Namobitsoni	Prosopis glandulosa Torr.	Honey Mesquite	Dried pods were pounded, resulting in a flour usually cooked with water to make gruel. Pods were also used with corn meal to make a beverage, sometimes fermented.	Fruit (legume)
Kusiʔwunu	Sophora secundiflora (Ortega) Lag. Ex. DC.	Mescal Bean		
Paasapuni	Quercus sp.	Oak	Yes	Nut (Acorn)
Paasapuni	Quercus marilandica	Blackjack Oak	Boiled, shelled, and eaten whole.	Nut (Acorn)
Huuʔaboka	Ribes aureum Pursh var. villosum DC.	Golden currant	Edible	Fruit
Nakutabaʔi/ Naʔkutabaʔi	Carya illinoensis (Wangenh.) K.Koch	Pecan	Nuts stored for winter use; nuts used in dried and pounded meats	Nut
	Juglans nigra L.	Black walnut	Edible	Seed, Root
Etehuupi/ Sohoboko	Morus rubra L.	Red mulberry	Fruits eaten fresh	Fruit
Keyiata/ Keyiats	Nelumbo lutea Willd.	American Lotus	Edible	Rhizome, Seed
	Nuphar Lutea (L.) Sm.	Yellow pond lilly	Edible	Rhizome
	Eriogonum longifolium Nutt.	Longleaf Buckwheat	Edible	Root
Tue Amowoo/ Turui Amawoo	Crataegus sp	Hawthorn; Red Haw	Fruits eaten fresh	Fruit, Inner Bark
Tubokoo/ Tuʔpoʔkoo	Crataegus sp	Hawthorn; Black Haw	Fruits eaten fresh; inner bark was chewed as gum	Fruit
Parawah	Prunus spp.	Plum	Edible	Fruit
Tuahuupi	Prunus angustifolia	Chickasaw plum	Eaten fresh or dried and stored	Fruit
	Rubus spp.	Blackberry	Edible	Fruit
Natsamukwe	Vitis spp.	Grape	Edible	Fruit

	Cirsium undulatum (Nutt.) Spreng.	Wayleaf Thistle	Raw roots used for food	Roots
Kusipokop		Winter plum	Eaten Raw	Fruit
Pisibuni	Typha spp.	Cattail	Roots boiled and eaten	roots

Bibliography

- Basso, Keith H. *Wisdom Sits in Places: Landscape and Language among the Western Apache* / Keith H. Basso. Albuquerque, N.M.: University of New Mexico Press, 1996.
- Bagelman, Caroline. "Unsettling Food Security: The Role of Young People in Indigenous Food System Revitalisation." *Children & Society* 32, no. 3 (2018): 219-32.
- Berkes, Fikret. *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*. New York, NY: Routledge, 1999.
- Berkes, Fikret, Johan Colding, and Carl Folke. "REDISCOVERY OF TRADITIONAL ECOLOGICAL KNOWLEDGE AS ADAPTIVE MANAGEMENT." *Ecological Applications* 10, no. 5 (2000): 1251-262.
- Berkes, Fikret, Henrik Moller, Philip Lyver, and Mina Kislalioglu. "Combining Science and Traditional Ecological Knowledge: Monitoring Populations for Co-management." *Ecology and Society* 9, no. 3 (2004): N/a.
- Biersack, Aletta. "Reverse Anthropology: Indigenous Analysis of Social and Environmental Relations in New Guinea by Stuart Kirsch." *American Ethnologist* 35, no. 4 (2008): 4018-022.
- Cajete, and Pueblo. "Contemporary Indigenous Education: A Nature-centered American Indian Philosophy for a 21st Century World." *Futures* 42, no. 10 (2010): 1126-132.
- Carlson, Gustav G. and Volney H. Jones. "Some Notes on Uses of Plants by the Comanche Indians." *Michigan Academy of Science, Arts, and Letters* 25:517-543. 1939.
- Centers for Disease Control and Prevention. *National Diabetes Statistics Report, 2017*. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2017.
- Corntassel, Jeff, and Cheryl Bryce. "Practicing Sustainable Self-Determination: Indigenous Approaches to Cultural Restoration and Revitalization." *The Brown Journal of World Affairs* 18, no. 2 (2012): 151-62.
- Douglas, Mary. "Deciphering a Meal." *Daedalus* 101, no. 1 (1972): 61-81.
- Douglas, Mary, and Jonathan Gross. "Food and Culture: Measuring the Intricacy of Rule Systems." *Social Science Information* 20, no. 1 (1981): 1-35.
- Dusselier, Jane. "Understandings of Food as Culture." *Environmental History* 14, no. 2 (2009): 331-38.
- Ellen, R. F., Parkes, Peter, and Bicker, Alan. *Indigenous Environmental Knowledge and Its Transformations: Critical Anthropological Perspectives* / Edited by Roy Ellen, Peter Parkes, Alan Bicker. *Studies in Environmental Anthropology*, v. 5. Amsterdam: Harwood Academic, 2000.
- Grey, Sam, and Lenore Newman. "Beyond Culinary Colonialism: Indigenous Food Sovereignty, Liberal Multiculturalism, and the Control of Gastronomic Capital." *Agriculture and Human Values* 35, no. 3 (2018): 717-30.

- Grey, Sam, and Raj Patel. "Food Sovereignty as Decolonization: Some Contributions from Indigenous Movements to Food System and Development Politics." *Agriculture and Human Values* 32, no. 3 (2015): 431-44.
- Heise, Ursula K., Christensen, Jon, Niemann, Michelle, and ProQuest. *The Routledge Companion to the Environmental Humanities* / Edited by Ursula K. Heise, Jon Christensen, and Michelle Niemann. Routledge Companions. 2017.
- Hoover, Elizabeth. "'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): 31-70.
- Isaac, Gwyneira, Symma Finn, Jennie R Joe, Elizabeth Hoover, Joseph P Gone, Clarita Lefthand-Begay, and Stewart Hill. "Native American Perspectives on Health and Traditional Ecological Knowledge." *Environmental Health Perspectives* 126, no. 12 (2018): 125002.
- Jacob, Michelle M. *Yakama Rising: Indigenous Cultural Revitalization, Activism, and Healing* / Michelle M. Jacob. First Peoples (2010). 2013.
- Johnson, Jay, Richard Howitt, Gregory Cajete, Fikret Berkes, Renee Louis, and Andrew Kliskey. "Weaving Indigenous and Sustainability Sciences to Diversify Our Methods." *Sustainability Science* 11, no. 1 (2016): 1-11.
- Kirsch, Stuart. *Reverse anthropology* / Stuart Kirsh. Stanford, Calif: Stanford University Press. 2006.
- Mihesuah, Devon. "Searching for Haknip Achukma (Good Health): Challenges to Food Sovereignty Initiatives in Oklahoma." *American Indian Culture and Research Journal* 41, no. 3 (2017): 9-30.
- Moerman, Daniel E. *Native American Food Plants : An Ethnobotanical Dictionary* / Daniel E. Moerman. Portland: Timber Press, 2010.
- LaRochelle, Serge, and Fikret Berkes. "Traditional Ecological Knowledge and Practice for Edible Wild Plants: Biodiversity Use by the Raramuri in the Sierra Tarahumara, Mexico." *International Journal of Sustainable Development and World Ecology* 10, no. 4 (2003): 361-75.
- Perrig, W. *International Encyclopedia of the Social & Behavioral Sciences* /. 1st ed. Amsterdam ;: Elsevier, 2001.
- Pilcher, Jeffrey M. "The Embodied Imagination in Recent Writings on Food History." *The American Historical Review* 121, no. 3 (2016): 861-87.
- Power, Elaine. "Conceptualizing Food Security for Aboriginal People in Canada." *Canadian Journal of Public Health* 99, no. 2 (2008): 95-97.
- Ramos, Seafha C. "Considerations for Culturally Sensitive Traditional Ecological Knowledge Research in Wildlife Conservation: Considerations for Culturally Sensitive TEK." *Wildlife Society Bulletin* 42, no. 2 (2018): 358-65.
- Robbins, Paul, and Fikret Berkes. "Sacred Ecology: Traditional Ecological Knowledge and Resource Management." *Economic Geography* 76, no. 4 (2000): 395.

- Ruelle, Morgan L. "Ecological Relations and Indigenous Food Sovereignty in Standing Rock." *American Indian Culture and Research Journal* 41, no. 3 (2017): 113-25.
- Ruelle, Morgan, Stephen Morreale, and Karim-Aly Kassam. "Practicing Food Sovereignty: Spatial Analysis of an Emergent Food System for the Standing Rock Nation." *Journal of Agriculture, Food Systems, and Community Development* 2, no. 1 (2011): 1-17.
- Salmón, Enrique. *Eating the Landscape: American Indian Stories of Food, Identity, and Resilience / Enrique Salmón. First Peoples* (2010). Tucson, Ariz.: University of Arizona Press, 2012.
- Salmón, Enrique. "Kincentric Ecology: Indigenous Perceptions of the Human-Nature Relationship". *Ecological Applications* 10, no. 5 (2000): 1327-332.
- Silko, Leslie Marmon. 1996. *Yellow Woman And A Beauty Of The Spirit*. New York: Simon & Schuster.
- Sutton, Juliet. "Native American Food Plants of Southwest Oklahoma. 2012.
- Tedlock, Barbara. "Performativity, Cultural Memory and Reverse Anthropology." *Etnofoor* 21, no. 2 (2009): 105-14.
- Turner, Nancy J. *Ancient Pathways, Ancestral Knowledge: Ethnobotany and Ecological Wisdom of Indigenous Peoples of Northwestern North America / Nancy J. Turner. McGill-Queen's Native and Northern Series; 74. 2014.*
- Turner, Nancy, and Turner, Katherine. "'Where Our Women Used to Get the Food': Cumulative Effects and Loss of Ethnobotanical Knowledge and Practice; Case Study from Coastal British Columbia." *Botany/Botanique* 86, no. 2 (2008): 103-15.
- Walters, Bradley. "Indigenous Environmental Knowledge and Its Transformations: Critical Anthropological Perspectives." *American Anthropologist* 105, no. 2 (2003): 406-07.
- Wiedman, Dennis. "Native American Embodiment of the Chronicities of Modernity: Reservation Food, Diabetes, and the Metabolic Syndrome among the Kiowa, Comanche, and Apache." *Medical Anthropology Quarterly* 26, no. 4 (2012): 595-612.
- Wilson, Nicole J, and Jody Inkster. "Respecting Water: Indigenous Water Governance, Ontologies, and the Politics of Kinship on the Ground." *Environment and Planning E: Nature and Space* 1, no. 4 (2018): 516-38.
- Wilson, Shawn. *Research Is Ceremony: Indigenous Research Methods / Shawn Wilson. Black Point, N.S.: Fernwood Pub., 2008.*
- Zappia, Natale. "Introduction." *American Indian Culture and Research Journal* 41, no. 3 (2017): 1-8.