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REPURPOSING THE COMPARATIVE METHOD FOR PAWNEE LANGUAGE AND DIALECT REVITALIZATION

A THESIS APPROVED FOR THE
DEPARTMENT OF ANTHROPOLOGY

BY

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This work is dedicated to the past, present, and future generations of Pawnee people. May we always be adamant in regard to who we are and where we come from. In addition, this work is dedicated to my uncle, the late Thomas E. KnifeChief. He is one of the men responsible for my interest in the revitalization of our Pawnee language.

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My graduate thesis would not have been possible without the previous work carried out by Pawnee and Arikara speakers and researchers. I am indebted to the numerous named and unnamed speakers who worked with John B. Dunbar, Gene Weltfish, Dr. Douglas Parks, and Dr. Francesca Merlan. I am also extremely grateful to Dr. Gene Weltfish and Dr. Douglas Parks for their contributions to the linguistic analysis of the Pawnee language. I am also very grateful to my committee chair, Dr. Racquel-María Sapién, for your earnest support and guidance throughout this process. There is no way I would have completed this or met any of my deadlines without you. I would also like to thank Dr. Gus Palmer, Jr. for serving on my committee and making me laugh and enjoy this process, for your kind words, and for keeping your door open to chat with me. Additionally, I would like to thank Dr. Marcia Haag for serving on my committee and helping me gain a better understanding of Pawnee verbal morphology. Without you, I would have been beating my head against the wall alone. Moreover, I appreciate all the support and prayers from those in the Pawnee tribal community. Your support reminded me why I am doing this to begin with. I especially want to thank all my friends and family for keeping me sane throughout this process. To my nephews, Gabe and Mason, spending time with you both and watching you reminded me to take the time to slow down and enjoy life. Finally, to Breanna, your persistence and dedication to your education for the betterment of the People is an inspiration to me. There is no way I would have completed this without you. Without you or Racquel, I would still be twiddling my thumbs hoping this paper would magically write itself. Now I can say this paper is finally finished.

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Abstract

A member of the Caddoan language family, Pawnee is a nearly extinct language with few living fluent speakers. However, there is an active, community-led revitalization movement. Community members involved in revitalization of Pawnee have a need for materials that support their efforts. This thesis demonstrates an innovative repurposing of the comparative method that is directly applicable to language revitalization.

Traditionally, the comparative method is used in linguistics to establish genetic relationships and reconstruct proto-forms. In this thesis, the author uses the comparative method to establish sound correspondences between two Pawnee dialects, Skiri and South Band, and Arikara, a closely related language. These correspondences are used to propose new Pawnee words based on documented Arikara forms. Constructing new terms based on existing documentation of a related language ensures that the proposed forms are consistent with what is known about Pawnee phonology and morphophonemics. Furthermore, repurposing the comparative method makes Arikara and Pawnee linguistic material more accessible to both tribal communities for language revitalization purposes.

The thesis includes extensive appendices illustrating sound correspondences, cognate forms, and new Pawnee terms as proposed by the author.

Chapter 1: Introduction to the Pawnee and Arikara

Introduction

As a Native academic in the field of Linguistic Anthropology and a Pawnee tribal member, my preoccupation is with the Pawnee tribal community and Pawnee language revitalization efforts. As a Pawnee person, I feel that I have a responsibility to help perpetuate Pawnee ways, of which Pawnee language is an integral part. Like previous generations of Pawnee people, I feel that I owe it to past, present, and future generations to do everything in my power to perpetuate Pawnee ways. Additionally, I strongly believe that our Pawnee elders worked with various anthropologists and linguists because they knew that one day this could be the only hope for our language to survive. Because of these efforts by community members and linguists, the Pawnee people have an extensive record of the Pawnee language. Therefore, my duty is to utilize this documentation and do everything in my power to contribute to current Pawnee language revitalization efforts. This thesis represents one small part of a greater movement toward Pawnee language revival. In addition, this thesis is representative of a new era of language revitalization in the Pawnee tribal community. Until this point in time, Pawnee language revitalization efforts have been primarily led by older generations of Pawnee tribal members. Recently, younger generations of Pawnee tribal members are stepping up to help lead in Pawnee language revitalization efforts. As I write this thesis, another Pawnee scholar of this younger generation is writing about utilizing Pawnee songs and hymns as tools for language revitalization.

This thesis aims to repurpose the comparative method to aid in these efforts. In this study, I utilize the comparative method in an unconventional manner. That is to say

that the comparative method is not being utilized as a tool to recover linguistic history, reconstruct a proto-language, establish a language family, or research distant genetic relationships. Instead, the comparative method is being repurposed to construct and propose words, which currently do not exist in the documentation, for Pawnee language and dialect revitalization. This study utilizes the comparative method to establish sound correspondences between two Pawnee dialects, Skiri and South Band, and Arikara, which is closely related to Pawnee, with a goal of making Arikara linguistic material available to the Pawnee tribal community for language revitalization purposes. Essentially, this thesis aims to repurpose the comparative method by making the comparative method a more useful language revitalization tool for the Pawnee and Arikara tribal communities. In this thesis, I have only proposed Pawnee words; I did not attempt to propose Arikara words based on this repurposed comparative method because it is not my place to do this, as I am not an Arikara tribal community member. However, the sound correspondences established and demonstrated in this thesis will allow for Arikara tribal community members to utilize this repurposed comparative method as well. It is my hope that the Arikara tribal community will also find this study helpful in their language revitalization endeavors.

The Pawnee language is a Caddoan language that has been spoken by an ever-decreasing number of elders. Since the late 1800s and early 1900s, the Pawnee tribal community has seen a drastic decline in the number of proficient speakers. Lula Nora Pratt was the last truly fluent speaker of the Pawnee language and she passed away in 2001 at ninety-two years of age. Because the Pawnee language is in this type of situation, linguistic documentation is an invaluable resource to those in the Pawnee

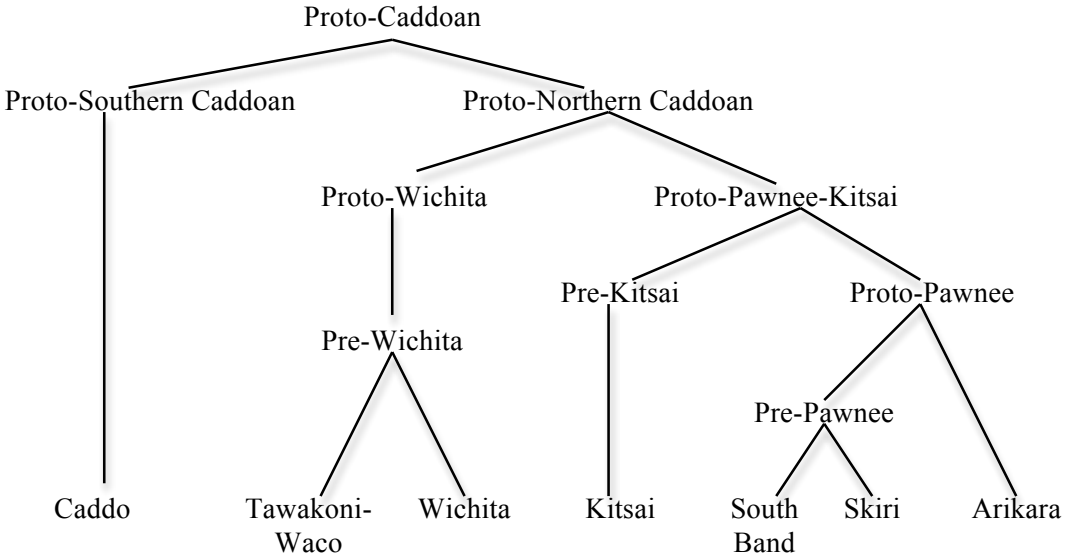
tribal community undertaking language revitalization projects. The way I have utilized this linguistic documentation is by proposing new Pawnee words based upon the existing documentation of Arikara, South Band Pawnee, and Skiri Pawnee. By analyzing complex Arikara words, finding cognate morphemes in either South Band Pawnee or Skiri Pawnee and then using my comparative analysis of the these varieties, I can construct new complex words in Pawnee. While I utilize the comparative method, I do not reconstruct proto forms, but rather my constructions are novel forms that conform to Pawnee morphophonemic rules. This use of the comparative method is extremely important because it serves as a practical way to create Pawnee words. Without first language speakers, innovative ways to create new words are essential for Pawnee language revitalization purposes. Based upon my experiences as an academic scholar and Pawnee tribal community member, I chose to study both Arikara and Pawnee for various reasons. First, Pawnee oral history tells us that the Pawnee and Arikara are closely related in culture and language. The comparative work done on Pawnee and Arikara confirms what the Pawnee tribal community has already known through our oral stories. Moreover, the belief or ideology that the Pawnee and Arikara speak or spoke the same language is one of my main inspirations for this work. The other inspiration for this work comes from the various tribes, such as the Wampanoag and Otoe-Missouria, who have already utilized this practice effectively. Finally, there are efforts underway in the Pawnee tribal community, by others and myself, to begin reestablishing our relationship with the Arikara tribal community. This study is my personal good faith effort in the process of reestablishing this relationship with our Arikara relatives to the north.

Furthermore, it is my hope that this work of repurposing the comparative method for language revitalization also serves to bridge the gap between the needs of the Pawnee tribal community and the needs of the academy. This thesis also aims to be inclusive to both a non-academic and an academic audience. In order to do this, I have attempted to describe concepts that may be familiar to academics in more detail and vice versa for Pawnee community concepts that may be unfamiliar to the academic community.

Background

The Pawnee language is a member of the Caddoan language family. More specifically, Pawnee is a member of the Northern Caddoan branch of the Caddoan language family. Other members of the Northern Caddoan branch of the Caddoan language family are Arikara, Kitsai (now extinct), and Wichita. The Caddo language is the only other member of the Caddoan language family and it constitutes the only member of the southern branch of the Caddoan language family (Parks 2001). Together, Caddo, Wichita, Kitsai, Pawnee, and Arikara comprise the Caddoan language family. Figure 1 illustrates the Caddoan language family tree.

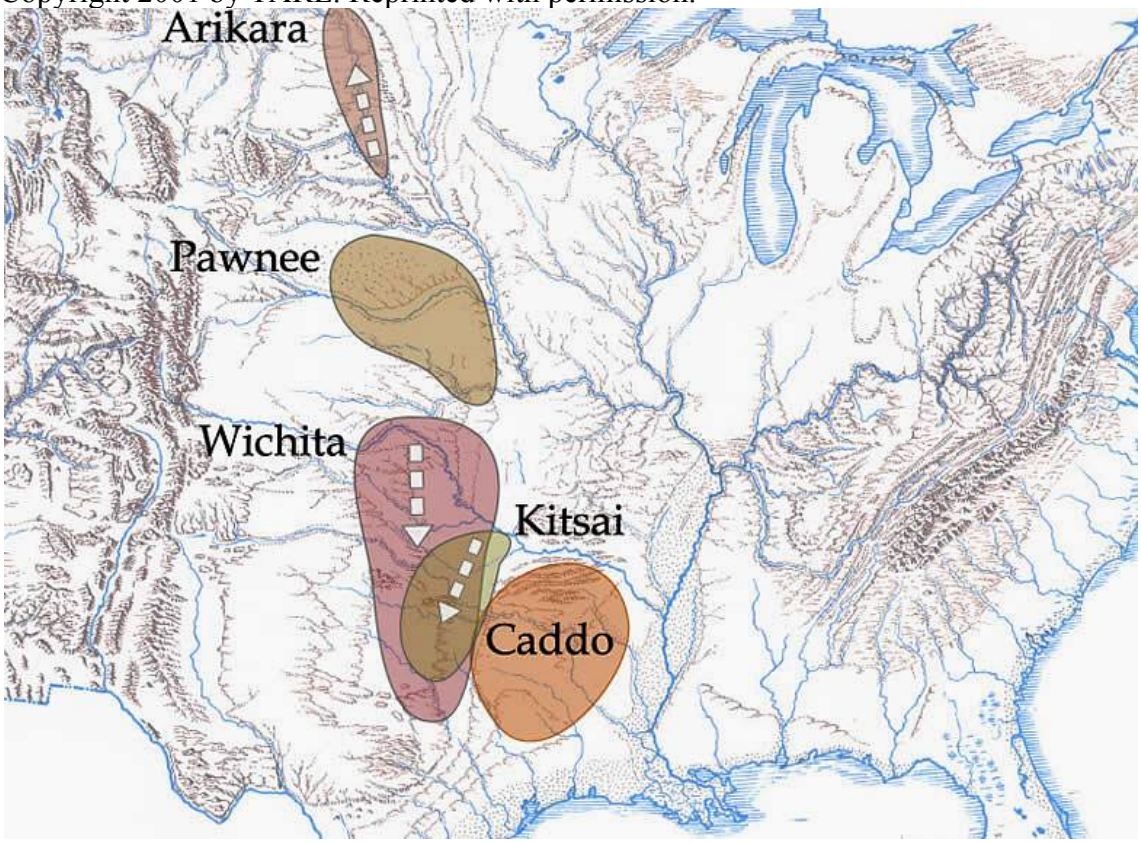
Figure 1: Caddoan Language Family Tree. Adapted from Parks (2001). [1]



Historically, the Caddoan speaking tribes stretched from present-day Louisiana, Texas, and Arkansas to present-day South and North Dakota. Representing the southernmost group of Caddoan speakers was Caddo. The Caddo resided in portions of Louisiana, Texas, Arkansas, and Oklahoma. Also residing in a similar area were the Kitsai. The Kitsai lived in parts of Louisiana, Texas, and Oklahoma. The Wichita lived slightly north of these groups in portions of Texas, Oklahoma, and Kansas. The Pawnee lived farther north of the Wichita in portions of Kansas and Nebraska. Finally, the Arikara were the northernmost representatives of the Caddoan language family. The Arikara resided north of the Pawnee in portions of Nebraska, South Dakota, and eventually settling in their present location in North Dakota.

[1] Caddo Proper and Hainai are dialects of Caddo, but are not illustrated in this tree.

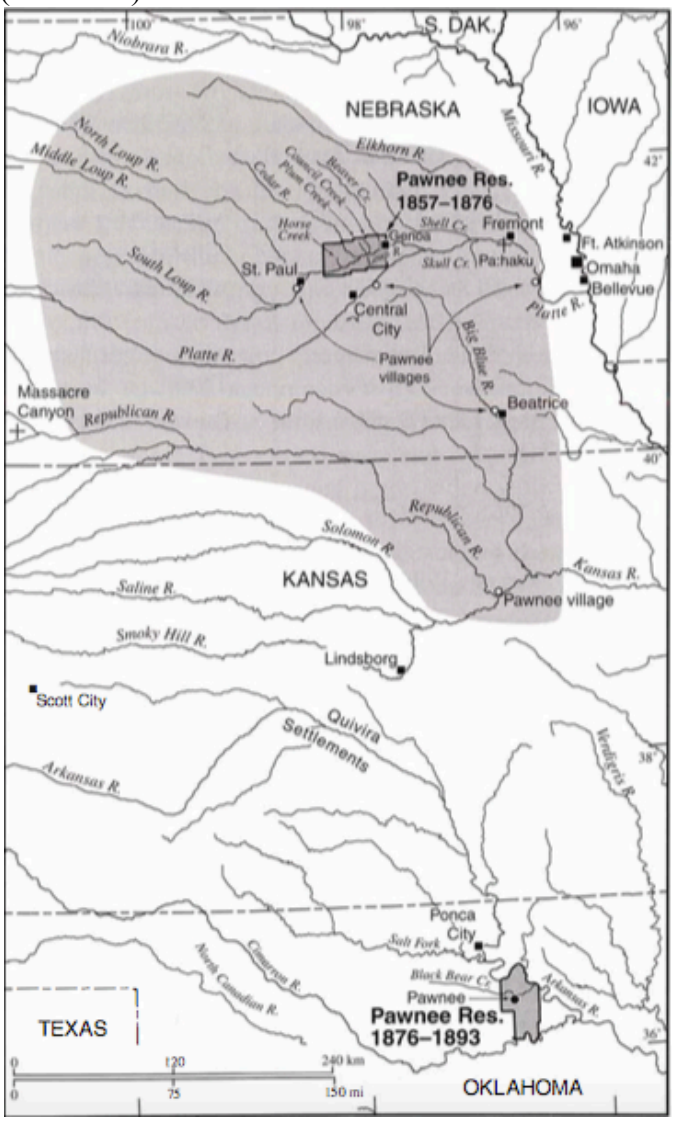
Figure 2: Caddoan Family Language Map. Reprinted from *Texas Beyond History*, Texas Archaeological Research Laboratory (TARL) at the University of Texas, Austin. Copyright 2001 by TARL. Reprinted with permission.



In the eighteenth century, the Pawnee people lived along the Loup, Platte, and Republican Rivers, which flow eastward across the present states of Nebraska and Kansas eventually emptying into the Missouri River (Weltfish 1965:4). At this time, the northernmost group was the Skiri Band, which lived along the Loup River in Nebraska. The Chawi, Kitkahahki, and Pitahawirata, otherwise known as the South Band Pawnee, or *tuhaawit*, by the Skiri, lived downstream to the east and south of the Skiri along the Platte and Republican Rivers in Nebraska and Kansas. This distinction between the Skiri and the South Band Pawnee is important because a dialect distinction existed between the Skiri dialect and the South Band dialect of the Chawi, Kitkahahki, and Pitahawirata (Parks 2001:515). Upon signing a treaty with the United States

government in 1857, reservation lands were set aside for the Pawnee people on the Loup River in what would become present-day Nance County, Nebraska (Parks 2001:520). Approximately twenty years later, the Pawnee people were removed to Indian Territory between the Arkansas and Cimarron Rivers in what is most of present-day Pawnee County, Oklahoma (Parks 2001:523). Today, many Pawnee people still reside in and around the town of Pawnee, Oklahoma, which houses their tribal headquarters on their former reservation lands in present-day Pawnee County, Oklahoma.

Figure 3: Pawnee Territory and Reservations Map. Reprinted from Parks (2001:515).

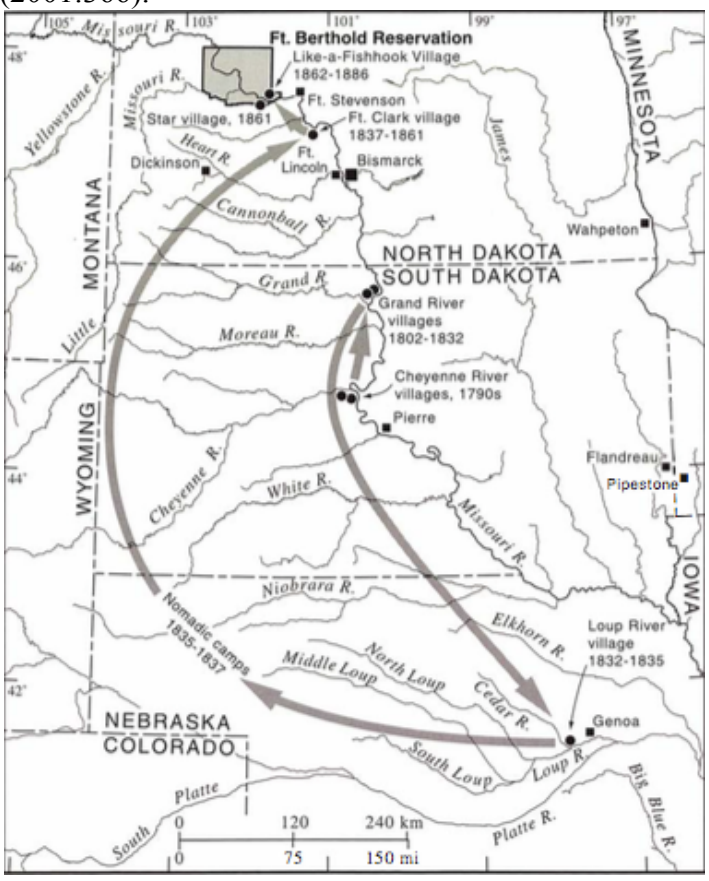


According to Pawnee oral history, the Pawnee and Arikara are related tribes and the Pawnee and Arikara people could understand one another's speech. Pawnee oral history confirms academic descriptions, which note that in the past the Arikara lived in present day South Dakota and had two major dialect groups. One dialect approximated the speech of Pawnee speakers and was considered to be "drawling," while the other dialect "diverged more sharply and closely resembled twentieth-century Arikara speech" (Parks 2001:80; Parks 2001:365). Arikara is, in fact, the northernmost member

of the Northern Caddoan branch of the Caddoan language family and a dialect of Arikara may have been mutually intelligible with Pawnee at a time in the not so distant past. Furthermore, the more contemporary Arikara language has and can be considered to be a highly divergent dialect of Pawnee in a very strict linguistic sense (Lesser and Weltfish 1932; Taylor 1963a; Chafe 1976; Chafe 1979; Parks 1979); however, Arikara is more appropriately deemed as a separate language due to the present lack of mutually intelligibility between Pawnee and Arikara and the fact that the Arikara are politically and geographically independent of the Pawnee (Parks 2001:80).

While the Pawnee people remained in the Kansas and Nebraska area, the Arikara lived primarily along the Missouri River in present-day South Dakota. The Arikara would continue a gradual northward movement along the Missouri River after devastating smallpox epidemics (Parks 2001:366). This movement ended with their resettlement in 1862 on the Fort Berthold Reservation in North Dakota with the Mandan and Hidatsa, which are both Siouan-speaking tribes (Parks 2001:365). Together, the Mandan, Hidatsa, and Arikara tribes comprise the Three Affiliated Tribes, or the MHA Nation. This political unity between the Mandan, Hidatsa, and Arikara tribes began in 1866 after they signed the Treaty of Fort Berthold, which went un-ratified (Schneider 2001:391). In 1870 President Grant signed an executive order, which finally designated lands set aside for the Three Affiliated Tribes (Schneider 2001:391). Today, many Mandan, Hidatsa, and Arikara people still reside on and around the Fort Berthold Reservation in North Dakota.

Figure 4: Arikara Territory and Reservation Map. Reprinted from Parks (2001:366).



Language Statuses

For decades, the number of Pawnee speakers has been decreasing. During the summers of 1928 and 1929, the anthropologist Gene Weltfish wrote "while many of the older people speak the language in the classic style of former days…Pawnees fifty years old and younger speak a simplified, more elementary version, using English for most purposes" (Weltfish 1937:vi). By her description, we can see that Pawnee was already beginning to go out of use among the parental generation during the 1920s. Furthermore, Weltfish also noted that it was rare to find a child who spoke the variety of the language of the parental generation in the 1920s. By the 1960s, the linguistic anthropologist Douglas Parks offered an estimation of one hundred to two hundred

speakers over the age of fifty (Parks 1976:2). By his description of the language situation, Pawnee was only occasionally used, while English was used in most situations. In 2001, the last truly fluent speaker of Pawnee passed away (Parks 2008:vii). According to Ethnologue, there are reported to be ten speakers of the Pawnee language as of 2007. With this estimation of speakers, Ethnologue categorizes the Pawnee language as an 8b or nearly extinct on the Expanded Graded Intergenerational Disruption Scale (EGIDS). Level 8b or nearly extinct is defined by Pawnee having only elderly speakers of the language that have little opportunity to use the language (Lewis, Simons, & Fennig 2016). According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) Atlas of the World's Languages in Danger, the Pawnee language is critically endangered (Moseley 2010).

For decades, like the Pawnee, the number of Arikara speakers has been decreasing, as well. During the summers of 1971 and 1972 and the summer and fall of 1973, the anthropologist Francesca C. Merlan estimated there to be no more than thirty Arikara speakers (Merlan 1975:1). According to Ethnologue, there are reported to be ten speakers of the Arikara language as of 2007. With this estimation of speakers, Ethnologue categorizes the Arikara language as an 8b or nearly extinct on the EGIDS. Like the Pawnee language, Arikara has only elderly speakers of the language that have little opportunity to use the language, according to Ethnologue (Lewis et al. 2016). According to UNESCO Atlas of the World's Languages in Danger, Arikara is also critically endangered, like Pawnee (Moseley 2010).

Existing Publications on the Pawnee Language

Despite the fact that Pawnee speaking people of the central plains have been known about by Europeans since the 1600s, documentation and description of the Pawnee language did not begin until much later. With that being said, there is still a decent amount of literature on the Pawnee language. Most nineteenth century material on the Pawnee language is limited to mostly small vocabularies collected by travelers, missionaries, and anthropologists. The Thomas R. McCann Papers (1856) is one example of a vocabulary list collected from this period. Another example of a vocabulary list collected during this period is The Brief Notes of the Pawnee, Winnebago, and Omaha Languages by F.V. Hayden (1868). A more extensive vocabulary that was collected during this time is Pawnee Vocabulary by John B. Dunbar (1850s-1980s). This early work is an invaluable resource of early Pawnee vocabulary. The exception to these nineteenth century vocabularies is John Brown Dunbar's brief sketch of The Pawnee Language (1890) in George Bird Grinnell's Pawnee Hero Stories and Folk-Tales. While John B. Dunbar's linguistic work is not modern, it is good for its time. Additional vocabulary exists in Melvin R. Gilmore's Uses of Plants by the Indians of the Missouri River Region (1919), which includes Pawnee names for and uses of plants. There is also a grammatical sketch of the Pawnee language by Gene Weltfish in *The Vision Story of Fox Boy, a South Band Pawnee Text* (1936). Additionally, Weltfish published a collection of texts titled *Caddoan Texts: Pawnee, South Band Dialect* (1937) and ethnography titled *The Lost Universe* (1965), which includes some vocabulary and kinship terms. Another work by Weltfish is an unpublished Morphology of the Pawnee language (n.d.), which was never entirely

completed. The anthropologist Douglas Parks has written the most recent and extensive publications on the Pawnee language. In 1972, Parks' doctoral dissertation was a grammatical sketch of the phonology and morphology of the South Band dialect of the Pawnee language. In 1976, Parks' *A Grammar of Pawnee* was published as a slightly revised version of his doctoral dissertation. Parks also published Pawnee language texts in Caddoan Texts (1977). Parks is also the Co-Director of the American Indian Studies Research Institute (AISRI) at Indiana University – Bloomington, which is responsible for the AISRI Skiri Pawnee Dictionary Portal and the AISRI South Band Dictionary Portal. *An Introduction to the Pawnee Language: Skiri Dialect* (Parks 2001) is an introduction to basic grammatical concepts and vocabulary in Pawnee. Finally, *A Dictionary of Skiri Pawnee* (2008) is Parks' most recent publication that he coauthored with Lula Nora Pratt, who was the last truly fluent speaker of Pawnee.

Existing Publications on the Arikara Language

Similar to the Pawnee language, there also seems to be a fair amount of Arikara language literature; however, I have not personally obtained as much Arikara literature as I have for the Pawnee language. Moreover, I have found little nineteenth century Arikara language material, though it surely exists. One of the first linguistic examinations of Arikara was Francesca C. Merlan's dissertation about *Noun-Verb Relationships in Arikara Syntax* (1975). Douglas Parks and Alan Taylor also presented some Arikara texts in Caddoan Texts (1977). Additionally, Douglas Parks, Janet Beltran, and Ella P. Waters described the Arikara language in an *Introduction to the Arikara Language* (1979). More extensive Arikara texts are presented by Parks in

Traditional Narratives of the Arikara Indians: Vol. 1, The Stories of Alfred Morsette: Interlinear Linguistic Texts; Vol. 2, The Stories of Other Narrators: Interlinear Linguistic Texts; Vol. 3, The Stories of Alfred Morsette: English Translations; Vol. 4, The Stories of Other Narrators: English Translations (1991). As with Pawnee, the American Indian Studies Research Institute (AISRI) maintains an online Arikara Dictionary Portal. Finally, there is an English to Sanish (Arikara) Language Dictionary based on Parks' *English-Arikara Student Dictionary* (1986), an *Arikara Coloring Book: an English Arikara Word Builder* (1984), and an *Introduction to the Arikara Language* (1979) accessible online through the Fort Berthold Community College's website.

Existing Comparative Caddoan Publications

In addition to the independent Pawnee and Arikara documentation, there are also quite a few comparative Caddoan publications, which include Pawnee and Arikara language data. Some of these comparative works that either portray a relationship between Pawnee and Arikara or compare Pawnee and Arikara language data, include *Contributions on the Ethnology and Philology of the Indian Tribes of the Missouri Valley* by F.V. Hayden (1863), Alexander Lesser and Gene Weltfish's *Composition of the Caddoan Linguistic Stock* (1932), Allan R. Taylor's *Comparative Caddoan* (1963a), and *The Classification of the Caddoan Languages* (1963b). Other comparative works portraying a relationship between Arikara and Pawnee or comparing Pawnee and Arikara language data are Wallace L. Chafe's *The Caddoan, Iroquoian, and Siouan Languages* (1976), Wallace Chafe's Caddoan in *The Languages of Native America: Historical and Comparative Assessment* (1979), Douglas R. Parks' *The Northern*

Caddoan Languages: Their Subgrouping and Time Depths (1979), Parks' Caddoan Languages in *Handbook of North American Indians* (2001), and Ives Goddard's The Languages of the Plains: Introduction in *Handbook of North American Indians* (2001).

Utilizing the Existing Pawnee and Arikara Publications

First and foremost, the AISRI Skiri, South Band, and Arikara Dictionary Portals serve as one of the primary sources for this comparative work. The other primary sources of this study are *A Grammar of Pawnee*, *A Dictionary of Skiri Pawnee*, and an *Introduction to the Arikara Language*. Furthermore, Dr. Parks' comparative works *The Northern Caddoan Languages: Their Subgrouping and Time Depths* (1979) and Caddoan Languages in *Handbook of North American Indians* (2001) were also used as a starting point for this particular study. In addition to these sources, other existing publications were used when a form was not found in these primary sources. For example, in Chapter 4, it was necessary to use these secondary sources to validate the proposed South Band Pawnee word for 'moose'. Without utilizing these secondary sources, John Brown Dunbar's Pawnee Vocabulary in particular, the proposed South Band Pawnee word for 'moose' could not be postulated with much certainty because South Band Pawnee did not have the necessary documented forms that would allow me to observe how the *a, h,* and *i* of *pah* and *ihari* would interact. While forms existed in the Arikara and Skiri primary documentation, they did not exist in the South Band Pawnee primary documentation. Next, after determining which documentation to utilize, I compiled a cognate word and phrase list, so as to include verb forms in this work, based upon functional Pawnee language that is beneficial to the Pawnee tribal

community attempting to revitalize their heritage language. The existing Pawnee publications were diligently examined so as to find functional Pawnee language from the word and phrase list. If or when these words or phrases cannot be found in the Pawnee documentation, the Arikara documentation was also diligently examined so as to find the corresponding functional language in Arikara.

Beginning with previous comparative Northern Caddoan work, I checked the known sound correspondences in Pawnee and Arikara. Next, I analyzed and established sound correspondences that have not been described to date. These are primarily sound correspondences in which consonants clusters in Pawnee do not correspond to consonant clusters in Arikara; however, there are also other sound correspondences that have not been described that I analyzed and established in this thesis.

After examining the known documentation for functional language and establishing sound correspondences for Arikara, Skiri Pawnee, and South Band Pawnee, I proposed Pawnee words for either or both Pawnee dialects that currently are not found in the existing Pawnee documentation. This is useful in making documentation for Pawnee language revitalization efforts more extensive and available to the Pawnee tribal community.

Goals of This Study

The goal of this thesis is to utilize the accessible Arikara and Pawnee written documentation and the comparative method to propose new words for either or both Pawnee dialects. Therefore, this repurposed comparative method is demonstrated in the following chapters. Chapter 2 gives a brief explanation as to why the particular

orthographic representations of Arikara and Pawnee were utilized in this thesis. Additionally, Chapter 2 provides an overview of the Arikara, South Band Pawnee, and Skiri Pawnee sound systems. In Chapter 3, the conventional use of the comparative method is explained and the seven steps of the comparative method are outlined as described by Lyle Campbell in Historical Linguistics: an Introduction. Furthermore, Chapter 3 begins the process of this comparative method by verifying previous sound correspondences and establishing new consonant cluster sound correspondences between Arikara, South Band Pawnee, and Skiri Pawnee cognates, which can be found in the appendix of this thesis. In Chapter 4, the analysis of Arikara and Pawnee morphemes and the adherence to Pawnee phonology during the construction and proposal of new Pawnee words demonstrate the steps of the repurposed comparative method. The final chapter concludes with a discussion of the various issues that arose while utilizing this repurposed comparative method and suggestions for future research.

Chapter 2: Orthographic Conventions and Overview of Pawnee and Arikara Sound Systems

Introduction

Before giving an overview of the Pawnee and Arikara sound systems, it is necessary to understand why these particular orthographic conventions in this thesis were chosen. Various practical orthographies have been developed and each one has its own merits. However, for this thesis, consistency across languages, linguistic accuracy, and a one sound to one symbol correspondence, such as that represented by the International Phonetic Alphabet (IPA), are the primary reasons for utilizing the orthographies in this thesis. Dr. Douglas Parks, who has worked on both the Pawnee and Arikara languages for more than forty years, developed these particular orthographies based on the North American Phonetic Alphabet (NAPA). Therefore, this style of orthographically representing and documenting these particular Northern Caddoan languages has had a relatively long tradition. Suffice it to say, this thesis greatly benefits from the consistency of these orthographies' ability to capture phonemes, the fact that these orthographies were made by the same person, and the fact that the Arikara, South Band Pawnee, and Skiri Pawnee documentation written in these particular orthographies were recorded approximately at the same point in time. Finally, the Pawnee and Arikara orthographies utilized in this thesis either approximate the practical orthography being utilized, as in the Pawnee community's case, or the orthography utilized in this thesis is the actual orthography being utilized, as in the Arikara community's case. I have based these assertions upon personal knowledge, in the Pawnee community's case, and upon witnessing some of the ongoing efforts of the

MHA (Mandan Hidatsa Arikara) Language Project that is accessible online at http://www.arikara.org.

The primary differences between the IPA and the NAPA-based orthographies used by Parks (2001) lie in the representation of fricatives and affricates. For example, in the IPA, the voiceless, post-alveolar affricate is represented by the digraph, [ʧ], which, in the Americanist tradition is represented by a single graph with a diacritic, [č]. Since one of the goals for this thesis is to adhere to a one-to-one sound-to-symbol correspondence, the latter symbol is used here. The one exception to this one-to-one correspondence is in the representation of long vowels. These are represented by a doubled symbol, such as [ii].

Arikara Orthography

The Arikara orthography in this thesis utilizes twenty-two symbols, which may be a letter, a mark, or a combination of a letter and a mark (Parks 1979:1). In addition, whispered sounds in Arikara are orthographically represented by a capital letter (Parks 1979:13). A raised ^{i} is also utilized to represent an elided 'i' in prefixes between t and n (Parks 2001:365). The symbols utilized in Arikara are as follows: p, t, k, ʾ, č, s, š, h, x, w, r, n, i, ii, e, ee, a, aa, o, oo, u, uu.

Pawnee Orthography

The Pawnee orthography in this thesis utilizes fifteen or seventeen symbols to represent the sounds of Pawnee depending on the dialect. The Skiri dialect of the Pawnee language has two fewer sounds than the South Band dialect of Pawnee;

therefore, the Skiri dialect utilizes fifteen symbols, while the South Band dialect utilizes seventeen symbols to represent the sounds of Pawnee. The symbols that are utilized in both Pawnee dialects are as follows: p, t, k, ʾ, c, s, h, w, r, i, ii, a, aa, u, uu. In addition to these symbols, South Band Pawnee utilizes the symbols e and ee, while Skiri Pawnee does not. Moreover, it is important to mention that while proper names and the first word in a sentence are typically capitalized as they are in English, this practice will not be reflected in this thesis because Arikara utilizes capital letters to represent devoiced or whispered sounds. Hopefully, this will alleviate an unnecessary issue that could cause some confusion in the interpretation of the Pawnee and Arikara in this thesis.

Arikara Sound System

The Arikara sound system exhibits a little more complexity than the Pawnee sound system; however, Arikara maintains a relatively small sound system as well. Arikara has twelve phonemic consonants and ten phonemic vowels, five of which are short and five of which are long (Parks 1979:1). Therefore, Arikara has a total of twenty-two sounds (Parks 1979:1). The consonants of Arikara are p, t, k, ʾ, č, s, š, h, x, w, r, n, while the vowels are i, ii, e, ee, a, aa, o, oo, u, uu.

Arikara Consonants

The consonants of Arikara are in Table 1. The consonants are arranged by manner and place of articulation. Following Table 1 is a brief description of the Arikara consonants. First, stop consonants are described and compared to similar sounds in another language. Then, affricates are described and compared to similar sounds in

another language. Next, fricatives are described and compared in the same manner. Finally, there is a brief description and comparison of the sonorants to similar sounds in another language.

Table 1: Arikara Consonants

		Labial	Alveolar	Post-alveolar	Velar	Laryngeal
Obstruents	Stops: voiceless	*p*	*t*		*k*	ʾ (ʔ)
	Affricate: voiceless			*č* (tʃ)		
	Fricatives: voiceless		*s*	*š* (ʃ)	*x*	*h*
Sonorants	Glide, Tap, and Nasal: voiced	*w*	*r* (ɾ), *n*			

Note: IPA equivalent of sound is in parentheses

There are four stop consonants (p, t, k, ʾ) in Arikara. These stop consonants are voiceless and unaspirated. Each stop consonant in Arikara is similar to a sound found in English. The 'p' in Arikara is a voiceless unaspirated stop. This sound is heard at the beginning of the Arikara word *paxuʾ* 'head' (Parks 1979:408). This 'p' sound is similar to the 'p' sound in the English word *spot*. The 't' in Arikara is also a voiceless unaspirated stop. This sound is heard at the beginning of the Arikara word *táWIt* 'three' (Parks 1979:413). This 't' sound is similar to the 't' in the English word *stop*. Like the previous two sounds, the 'k' sound in Arikara is also a voiceless unaspirated stop. This sound is heard at the beginning of the Arikara word *kaaxuʾ* 'leg' (Parks 1979:403). This 'k' sound is similar to the 'k' sound in the English word *scoff*. Arikara has one voiceless laryngeal stop (ʾ). The laryngeal stop or glottal stop produces a catch or stoppage of airflow in the throat and is pronounced like the brief stoppage of air between 'uh' and

‘oh’ in the English exclamation ‘uh-oh’. The laryngeal stop is heard between the vowels in the Arikara word *kaʾít* ‘sugar’ (Parks 1979:403).

There is one affricate (č) in Arikara. Similar to the stop consonants, the post-alveolar affricate is also voiceless and unaspirated. This sound is heard at the beginning of the Arikara word *čítUxʾ* ‘beaver’ (Parks 1979:400). The post-alveolar affricate approximates the ‘ch’ sound at the end of the English word *whi<u>ch</u>*.

There are four voiceless fricatives (s, š, x, h) in Arikara. The voiceless alveolar fricative (s) is heard at the beginning of the Arikara word *sápat* ‘woman’ (Parks 1979:410). The voiceless alveolar fricative (s) is very similar to the ‘s’ sound in the English word *<u>s</u>ip*. The voiceless post-alveolar fricative (š) is heard at the beginning of the Arikara word *šakuúnuʾ* ‘sun’ (AISRI Arikara Dictionary Portal). The voiceless post-alveolar fricative (š) is very similar to the ‘sh’ sound in the English word *<u>sh</u>*op. The voiceless velar fricative (x) is unlike any sound found in English. This sound is similar to the (x) in German *ich*. The voiceless velar fricative (x) occurs in a strong and soft variant. The strong variant’s place of articulation is made at the soft palate, while the soft variant of (x) is made on the hard palate (Parks 1979:2-3). The strong variant of the voiceless velar fricative is heard at the end of the Arikara word *sáx* ‘turtle’ (Parks 1979:2). The soft variant of the voiceless velar fricative is heard near the end of the Arikara word *skuúxuʾ* ‘hide, peeling’ (Parks 1979:3). The laryngeal fricative (h) also very closely resembles its English counterpart. This sound is heard at the beginning of the Arikara word *hiítuʾ* ‘feather’ (AISRI Arikara Dictionary Portal). It is pronounced similar to the ‘h’ sound in the English word *<u>h</u>op*.

There are three voiced sonorants (w, r, n) in the Arikara language. The voiced bilabial glide (w) is similar to its English counterpart. It is heard at the beginning of the Arikara word *wiítA* 'man' (Parks 1979:415). It is pronounced similar to the 'w' sound in the English word *will*. The voiced alveolar tap (r) closely approximates the allophone of the intervocalic /t/ as in the word *butter* in American English, or the tap in Spanish, as in *pero* 'but'. It is heard beginning the second and fourth syllables of the Arikara word *arikaraánuˀ* 'stag' (Parks 1979:397). The voiced alveolar nasal (n) is similar to its English counterpart. This sound is heard at the beginning of the Arikara word *niíšuˀ* 'arrow' (Parks 1979:407). It is pronounced similar to the 'n' sound in the English word *now*.

Arikara Vowels

The vowels of Arikara are in Table 2.4. The consonants are arranged by manner and place of articulation. Following Table 2.4 is a brief description of the Arikara vowels.

Table 2: Arikara Vowels

	Front	**Central**	**Back**
High	i, ii		u, uu
Mid	e, ee		o, oo
Low		a, aa	

As stated previously, Arikara has a total of ten phonemic vowels. Arikara has two high front unrounded vowels (i, ii), two mid front unrounded vowels (e, ee), two mid-low central to back unrounded vowels (a, aa), two mid back rounded vowels (o, oo) and two high back rounded vowels (u, uu) (Merlan 1978:27;Parks 1979:7-8). Similar to

Pawnee, some of the short vowels in Arikara vary in pronunciation between tense and lax forms (Merlan 1978:27; Parks 1979:7-8). The high front unrounded short vowel (i) varies between tense [i] and lax [ɪ] (Merlan 1978:27; Parks 1979:7). The mid-low central unrounded short vowel (a) varies between tense [ɑ] and lax [ə] (Merlan 1978:27; Parks 1979:7).

In addition to the short vowels, Arikara also has long vowels, which are always tense (Merlan 1978:27; Parks 1979:8). The long vowels found in both dialects of the Arikara language are (ii, ee, aa, oo, uu). Therefore, double (ii) is always [i:], double (ee) is always [e:], double (aa) is always [ɑ:], double (oo) is always [o:], and double (uu) is always [u:] (Parks 1979:8).

Pawnee Sound System

According to Parks, the sound inventories of Skiri Pawnee (SK) and South Band Pawnee (SB) are some of the smallest sound inventories in the languages of North America (2008:13; 1979:12). Parks also asserts that Skiri Pawnee has one of the smallest sound inventories in the world (2008:13). Skiri Pawnee has nine phonemic consonants and six phonemic vowels, three of which are short and three of which are long, while South Band Pawnee has nine phonemic consonants and eight phonemic vowels, four of which are short and four of which are long. Therefore, in total Skiri Pawnee has fifteen phonemes, while South Band Pawnee has seventeen phonemes. At the systematic phonetic level, there are ten consonants, which results in sixteen phonetic segments or sounds in Skiri Pawnee and eighteen phonetic segments or sounds in South Band Pawnee (Parks 2001:16-17; 1979:12). The consonants of Pawnee are p, t, k, ʾ, c, s,

h, w, r, while the vowels are i, ii, a, aa, u, uu, plus the additional vowels e and ee in South Band Pawnee.

Pawnee Consonants

The consonants of Pawnee are in Table 3. The consonants are arranged by manner and place of articulation. Following Table 3 is a brief description of the Pawnee consonants. First, stop consonants are described and compared to similar sounds in another language. Then affricates are described and compared to similar sounds in another language. Next, fricatives are described and compared in the same manner, followed by a brief description of the sonorants.

Table 3: Pawnee Consonants

		Labial	Alveolar	Velar	Laryngeal
Obstruents	Stops: voiceless	*p*	*t*	*k*	ʾ (ʔ)
	Affricate: voiceless		*c* (ts ~ tʃ)		
	Fricatives: voiceless		*s*		*h*
Sonorants	Glide and Tap: voiced	*w*	*r* (ɾ)		

Note: IPA equivalent of sound is in parentheses

There are four stop consonants (p, t, k, ʾ) in Pawnee. These stop consonants are always voiceless and unaspirated. Each stop consonant in Pawnee approximates a sound found in English. The ‘p’ in Pawnee is a voiceless unaspirated labial stop. It is heard in the Pawnee word *paksuʾ* ‘head’ (Parks 2008:458). This ‘p’ sound is similar to the ‘p’ sound in the English word *spot*. The ‘t’ in Pawnee is also a voiceless unaspirated stop. It

is a voiceless unaspirated alveolar stop. It is heard in the Pawnee word *tawit* 'three' (Parks 2008:512). This 't' sound is similar to the 't' in the English word *st*op. Like the previous two sounds, the 'k' sound in Pawnee is also a voiceless unaspirated stop. It is a voiceless unaspirated velar stop. It is heard in the Pawnee word *kaasuˀ* 'leg' (Parks 2008:422). This 'k' sound is similar to the 'k' sound in the English word *sk*ate. Pawnee has one voiceless laryngeal stop (ˀ). The laryngeal stop or glottal stop produces a catch or stoppage of airflow in the throat and is found in the English exclamation 'uh-oh'. The laryngeal stop is heard in the Pawnee exclamation *aakaˀa* 'oh my' (Parks 2008:350-351).

There is one affricate (c) in Pawnee. Like the stop consonants, the affricate is also always voiceless and unaspirated. The affricate has consistent phonetic variants. The apico-alveolar [ts] occurs preceding consonants and in word-final position, while the lamino-palatal [tʃ] occurs preceding a vowel. The apico-alveolar [c ~ ts] is heard before the second 'k' in the Pawnee word *kickuˀ* 'several', while the lamino-palatal [c ~ tʃ] is heard at the beginning of the Pawnee word *caski* 'a little' (Parks 2008:435, 204). Both allophones of the affricate (c) approximate sounds found in English as well. The apico-alveolar variant of c approximates the 'ts' sound at the end of the English word *cats*, while the lamino-palatal variant of c approximates the 'ch' sound at the end of the English word *whi*ch.

There are two voiceless fricatives (s, h) in Pawnee. The voiceless alveolar fricative (s) is heard at the beginning of the Pawnee word *sakuuruˀ* 'sun' (Parks 2008:500). This 's' sound is very similar to the 's' sound in the English word *sip*. The voiceless laryngeal fricative (h) is heard at the beginning of the Pawnee word *hiituˀ*

'feather' (Parks 2008:390). This 'h' sound very closely resembles its English counterpart. The 'h' sound in the English word *hip* is an example of the voiceless laryngeal fricative (h). Still, there is also a breathier variant of the voiceless laryngeal fricative (h) that occurs before other consonants, as in the Pawnee word *kuhku* 'pig' (Parks 2008:13). These two sounds are allophones of the same phoneme, as evidenced in the late 1920s by Gene Weltfish, linguist and student of Franz Boas, when she described this variant of the laryngeal fricative (h) as closely approximating (x) in German *ich* (Weltfish 1937:1).

There are two voiced sonorants (w, r) in the Pawnee language. The voiced labio-velar glide (w) is heard at the beginning of the Pawnee word *wis* 'hurry' (Parks 2008:529). The 'w' sound is similar to its English counterpart. The 'w' sound in the English word *will* is an example of the voiced labio-velar glide (w). The voiced apico-alveolar tap (r) is heard beginning the second, fourth, and fifth syllables in the Pawnee word *arikaraaruˀ* 'stag, buck deer' (Parks 2008:361). The 'r' sound closely approximates the allophone of the intervocalic /t/ as in the word *butter* in American English, or the tap in Spanish, as in *pero* 'but'. In addition, the tap has some variation with Pawnee speakers. Many speakers frequently pronounce the tap as a nasal [n] word-initially, while some speakers may even pronounce it occasionally as a lateral [l] (Parks 2008:14).

Pawnee Vowels

The vowels of Pawnee are in Table 4. The consonants are arranged by manner and place of articulation. Following Table 4 is a brief description of the Pawnee vowels.

Table 4: Pawnee Vowels

	Front	**Central**	**Back**

High	i, ii		u, uu
Mid	e, ee (SB dialect)		
Low		a, aa	

As previously stated, Pawnee has six to eight vowels, depending upon the dialect. Skiri Pawnee has six vowels, while South Band Pawnee has eight vowels. Pawnee has two high front unrounded vowels (i, ii), two mid-low central to back unrounded vowels (a, aa), and two back rounded vowels (u, uu) (Parks 1979:15; 2008:14). Additionally, South Band Pawnee has two mid front unrounded vowels (e, ee) (Parks 1979:15). The short vowels in Pawnee vary in pronunciation between tense and lax forms (Parks 1979:15; 2008:14). The high front unrounded short vowel (i) varies between tense [i] and lax [ɪ] (Parks 1979:15; 2008:14). The mid-low central to back unrounded short vowel (a) varies between tense [ɑ] and lax [ə] (Parks 1979:15; 2008:14). The back rounded short vowel (u) varies between tense [u] and lax [ʊ] (Parks 1979:15; 2008:14). The mid front unrounded short vowel (e) varies between tense [e] and lax [ɛ] (Parks 1979:15).

In addition to the short vowels, Pawnee also has long vowels, which are always tense (Parks 1979:15; 2008:14). The long vowels found in both dialects of the Pawnee language are (ii, aa, uu). Therefore, double (ii) is always [i:], double (aa) is always [ɑ:], and double (uu) is always [u:]. Furthermore, South Band Pawnee double (ee) is always [e:].

Arikara and Pawnee Phonology

As has been illustrated in this chapter, Arikara, South Band Pawnee, and Skiri Pawnee all exhibit small sound inventories and relative phonetic simplicity, especially with regard to the languages of the world. However, while the Arikara and Pawnee languages exhibit these small sound inventories and relative phonetic simplicity compared to the languages of the world, "Northern Caddoan languages are typologically fusional when combining morphemes into words and are therefore distinguished by complex sets of rules to account for the sound changes that occur in word formation. As a result, it is often difficult to identify all the morphemes comprising fully formed words" (Parks 2001:88). The designation of being fusional simply means that morphemes fuse or change their underlying forms to some extent in the word building process (Parks 2008:29). The fusional nature of Arikara and Pawnee poses some difficulty when attempting to establish sound correspondences and analyze Arikara and Pawnee morphemes to construct new Pawnee words. However, this subject is described and demonstrated in the Chapter 4: Repurposing the Comparative Method for Pawnee Language and Dialect Revitalization.

Chapter 3: Comparative Arikara and Pawnee

Introduction

Before getting into the comparative method and establishing sound correspondences between Arikara, South Band Pawnee, and Skiri Pawnee, it is necessary to understand what the comparative method is and what it is typically used to do. The comparative method is a technique utilized in historical linguistics to compare the linguistic features of two or more related languages (Campbell 2013:107). In historical linguistics, the comparative method is a useful tool for recovering linguistic history by giving linguists a tool to reconstruct proto-languages, detect loanwords, establish language families, and research distant genetic relationships (Campbell 2013:107). The basic assumption, which makes the comparative method such a useful tool to linguists, is that sound change is regular (Campbell 2013:143). In Chapter 2 of Historical Linguistics: an Introduction, Campbell states, "regular changes recur generally and take place uniformly wherever the phonetic circumstances in which the change happens are encountered" (2013:15). This means that a sound or sounds undergo a regular change, when certain phonetic circumstances or the environment condition the change. Furthermore, this means that sounds do not change in arbitrary and unpredictable ways. In order to better understand the comparative method, I will outline the steps of the comparative method for linguistic reconstruction as suggested by Lyle Campbell in Chapter 5 of Historical Linguistics: an Introduction. However, Campbell states, "it is not always necessary to follow all these steps in precisely the sequence described here" (2013:110). According to Campbell, step one is to assemble cognates and arrange them in an orderly list by columns or rows (2013:111). In step

two, it is necessary to begin establishing sound correspondences for the cognate sets (2013:111). In step three, proto-sounds are reconstructed from the evidence in the daughter languages (2013:112). In step four, Campbell suggests determining the status of partially overlapping correspondence sets (2013:118). In step five, Campbell suggests checking the plausibility of the reconstructed sound from the perspective of the overall phonological inventory of the proto-language (2013:124). In step six, Campbell suggests checking the plausibility of the reconstructed sound based upon linguistic universals and typological expectations (2013:126). In the final step, Campbell suggests reconstructing individual morphemes based upon these reconstructed proto-sounds (2013:127).

In this instance, the comparative method is not being utilized as a tool to recover linguistic history, reconstruct a proto-language, establish a language family, or research distant genetic relationships. Instead, the comparative method is being repurposed to construct and propose words, which currently do not exist in the documentation, for Pawnee language and dialect revitalization. Therefore, not all the steps suggested in Campbell 2013 will be used. The steps that will be used are the compilation of cognates, the establishment of sound correspondences, and determining the status of partially overlapping correspondence sets. Other steps in the process of utilizing the comparative method as a language revitalization tool are analyzing morphemes and phonology and adhering to Pawnee phonology during the construction and proposal of new Pawnee words. The repurposed comparative method, or these other steps that are slightly different from the conventional comparative method, for Pawnee language and dialect revitalization is the subject of Chapter 4 of this thesis.

Previously Established Consonant Correspondences

This thesis greatly benefitted from previous diachronic studies of the Northern Caddoan languages that established proto-sounds for Proto-Northern Caddoan. In addition, this thesis confirms many of the postulated sound correspondences for Pawnee and Arikara (Chafe 1979; Parks 2001). Ten of the postulated eleven Proto-Northern Caddoan consonants in Chafe 1979 and Parks 2001 are confirmed in this thesis. However, since my focus is on Arikara and Pawnee, Proto-Northern Caddoan *y, cannot be sufficiently confirmed in this thesis because of a lack of data. The following table is the consonant sound correspondences, which have been established between Arikara and the two Pawnee dialects utilizing the repurposed comparative method:

Table 5: Arikara, South Band Pawnee, and Skiri Pawnee Consonant Sound Correspondences

Arikara	South Band Pawnee	Skiri Pawnee
p	p	p
t	t	t
k, č	k	k
ʾ	ʾ	ʾ
s	c (c, č)	c (c, č)
x, š	s	s
h	h, ø-	h
w	w, p-	w, p-
r, n-	r	r
n	r	r

Sound Correspondence 1: Arikara *p*: South Band Pawnee *p*: Skiri Pawnee *p*

The voiceless, unaspirated, bilabial stop [*p*] is found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the *p* sound in Arikara and the Pawnee dialects will correspond to one another in most instances. Arikara *p* will directly correspond to *p* in the Pawnee dialects, but this does not necessarily hold true

for Pawnee *p* corresponding to Arikara *p*. Therefore, the one exception that does not allow for Pawnee *p* to always correspond to Arikara *p* will be discussed and illustrated in Sound Correspondence 7b. Some examples taken from the full list of cognates that are meant to illustrate Arikara *p* corresponding to Pawnee *p* follows:

Table 6: Cognates Illustrating Arikara *p*: South Band *p*: Skiri *p*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	p	*p*	*p*	
5	**p**ítkux	**p**itku(s)	**p**itku(s)	'two'
143	**p**itkuxunaánuˀ	**p**itkusuraaruˀ	**p**itkusuraaruˀ	'forty'
59	**p**áh	**p**ah	**p**ah	'moon'
7	sá**p**at	ca**p**at	ca**p**aat	'woman'
306	sa**p**iinaáNUx	c**p**iiraarus	c**p**iirarus	'fly', 'housefly'
107	á**p**aˀ	a**p**at	a**p**at	'your grandfather'
101	a**p**ak	a**p**ak	a**p**ak	'to fight'

Analysis

In the few examples provided above, the *p* in Arikara corresponds to the *p* in the South Band Pawnee and Skiri Pawnee dialects in all instances. In Cognate Sets (CS) 5, 143, and 59 initial *p* in Arikara ***p****ítkux* 'two', ***p****itkuxunaánu'* 'forty', and ***p****áh* 'moon ' corresponds to initial *p* in the Pawnee words ***p****itku* 'two', ***p****itkusuraaru'* 'forty', and ***p****ah* 'moon'. The medial *p*, or *p* found in the middle of a word, corresponds to medial *p* in South Band Pawnee and Skiri Pawnee, for the most part as well. In Cognate Sets 7, 306, 107, and 101, medial *p* in the Arikara words *sá****p****at* 'woman', *sa****p****iinaáNUx* 'fly, housefly', *á****p****aˀ* 'your grandfather', and the verb root *a****p****ak* 'to fight' corresponds to medial *p* in South Band Pawnee *ca****p****at* 'woman', *c****p****iiraarus* 'fly, house fly', *a****p****at* 'your grandfather', and *a****p****ak* 'to fight' and medial *p* in Skiri Pawnee *ca****p****at* 'woman', *c****p****iirarus* 'fly, housefly', *a****p****at* 'your grandfather', and *a****p****ak* 'to fight'. In Cognate Set

306 ‘fly, housefly’ Arikara *p* still corresponds to Pawnee *p*, even though *p* is a part of a consonant cluster *cp* in Pawnee, while Arikara *p* is immediately preceded by the vowel *a*. This is likely a case of elision. Elision is simply the deletion of a sound. Pawnee elided, or deleted, this sound, while Arikara did not. Moreover, the *p* sound is not found word-finally; therefore, when *p* is found in Arikara it will always correspond to *p* in Pawnee. Finally, it is important to note that the verb form, ‘to fight’, illustrated here is not a fully inflected verb because Pawnee verbs are obligatorily inflected, overtly or covertly, for mode/mood, person, number, aspect, and subordination (Parks 1976:144). This simply means that the verb form *apak* ‘to fight’ does not stand alone as a pronounceable word, unless it is marked for the grammatical categories previously mentioned.

Sound Correspondence 2: Arikara *t*: South Band Pawnee *t*: Skiri Pawnee *t*

The voiceless, unaspirated, alveolar stop [*t*] is found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the *t* sounds typically correspond to one another; however, the exceptions to this will be discussed and illustrated in Sound Correspondences 4, 18, and 19. Some examples taken from the full list of cognates that are meant to illustrate Arikara *t* corresponding to Pawnee *t* follows:

Table 7: Cognates Illustrating Arikara *t*: South Band *t*: Skiri *t*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	t	*t*	*t*	
1	**-t-**	**-t-**	**-t-**	1.A
5	pí**t**kux	pi**t**ku(s)	pi**t**ku(s)	‘two’
85	**t**áWIt	**t**awit	**t**awit	‘three’
8	wií**t**a	pii**t**a	pii**t**a	‘man’
64	čiwíh**t**uˀ	kiwiik**t**uˀ	kiwik**t**uˀ	‘sand’
122	á**t**a**t**	a**t**a**t**	a**t**aa**t**	‘your sister

46	i**t**ka	i**t**ka	i**t**ka	(male speaking)' 'be asleep', 'sleep'

Analysis

In the examples provided above, the *t* in Arikara corresponds to the *t* in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets (CS) 85 initial *t* in Arikara ***t****áWIt* 'three' corresponds to Pawnee ***t****awit* 'three'. The medial *t* in Arikara corresponds to medial *t* in South Band Pawnee and Skiri Pawnee. In Cognate Sets 1, 5, 8, 64, 122, and 46 the medial *t* in the Arikara words or morphemes -***t***- '1st person pronominal agent', *pí**t**kux* 'two', *wii**t**a* 'man', *čiwíh**t**u'* 'sand', *á**t**at* 'your sister (male speaking)', and *i**t**ka* 'be asleep, sleep', medial *t* in South Band Pawnee -***t***- '1st person pronominal agent', *pi**t**ku(s)* 'two', *pii**t**a* 'man', *kiwiik**t**uˀ* 'sand', *a**t**at* 'your sister (male speaking)', and *i**t**ka* 'be asleep, sleep', and medial *t* in Skiri Pawnee -***t***- '1st person pronominal agent', *pi**t**ku(s)* 'two', *pii**t**a* 'man', *kiwik**t**uˀ* 'sand', *a**t**aat* 'your sister (male speaking)', and *i**t**ka* 'be asleep, sleep' correspond. The -*t* -'1st person pronominal agent' is treated as a medial sound because it is typically found after the mode/mood. The final *t* in Arikara also corresponds to final *t* in South Band Pawnee and Skiri Pawnee. In Cognate Set 85 and 122, final *t* in Arikara *táWI**t*** 'three' and *áta**t*** 'your sister (male speaking)', final *t* in South Band Pawnee *tawi**t*** 'three' and *ata**t*** 'your sister (male speaking)', and final *t* in Skiri Pawnee *tawi**t*** 'three' and *ataa**t*** 'your sister (male speaking)' correspond. Again, it is important to note that the verb form illustrated here is not a fully inflected verb because Pawnee verbs are obligatorily inflected, overtly or covertly, for mode/mood, person, number, aspect, and subordination (Parks 1976:144).

Sound Correspondence 3a: Arikara *k*: South Band Pawnee *k*: Skiri Pawnee *k*

The voiceless, unaspirated, velar stop [*k*] is found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the *k* sound in Arikara corresponds to the *k* sound in South Band Pawnee and Skiri Pawnee in most instances; however, the reverse statement of Pawnee *k* corresponding to Arikara *k* is not always true. These instances will be discussed and illustrated in Sound Correspondence 3b; while the other exceptions will be discussed and illustrated in some newly established consonant cluster sound correspondences. Some examples taken from the full list of cognates that are meant to illustrate Arikara *k* corresponding to Pawnee *k* follows:

Table 8: Cognates Illustrating Arikara *k*: South Band *k*: Skiri *k*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	k	*k*	*k*	
4	áx**k**Ux	as**k**u(s)	as**k**u(s)	'one'
22	nipií**k**uˀ	ripii**k**uˀ	ripii**k**uˀ	'egg'
63	**k**anítš	**k**aritki	**k**aritki	'rock', 'stone'
191	**k**aáxuˀ	**k**aasuˀ	**k**aasuˀ	'leg'
104	á**k**aˀ	a**k**aˀ	a**k**aˀ	'your grandmother'
44	at**k**aˀu	at**k**aˀu	at**k**aˀu	'to hear'

Analysis

In the examples provided above, the *k* in Arikara corresponds to the *k* in the South Band Pawnee and Skiri Pawnee dialects in all instances. In Cognate Sets 63 and 191 initial *k* in Arikara ***k**anítš* 'rock, stone' and ***k**aáxuˀ* 'leg' corresponds to Pawnee ***k**aritki* 'rock, stone' and ***k**aasu'* 'leg'. The medial *k* in Arikara also corresponds to medial *k* in Pawnee. In Cognate Sets 4, 22, 104, and 44, medial *k* in Arikara *áx**k**Ux* 'one', *nipií**k**uˀ* 'egg', *á**k**aˀ* 'your grandmother', and *at**k**aˀu* 'to hear' corresponds to

medial *k* in the Pawnee words *as**k**u(s)* ‘one’, *ripii**k**uʾ* ‘egg’, *a**k**aʾ* ‘your grandmother’, and *at**k**aʾu* ‘to hear’. *k* is not found word-finally at the phonetic level, because it undergoes a phonological change from *k* to *t* (Parks 1976:50). Therefore, when *k* is found in Arikara it will always correspond to *k* in Pawnee. Finally, it is important to note that the verb form, ‘to hear’, illustrated here is not a fully inflected verb because Pawnee verbs are obligatorily inflected, overtly or covertly, for mode/mood, person, number, aspect, and subordination (Parks 1976:144). Therefore, *atkaʾu* ‘to hear’ is not an independent pronounceable word.

Sound Correspondence 3b: Arikara *č*: South Band Pawnee *k*: Skiri Pawnee *k*

The post-alveolar, voiceless affricate [*č*] found in Arikara does not correspond to the *c* sound found in the South Band Pawnee and Skiri Pawnee sound inventories. Instead, the *č* sound in Arikara corresponds to the *k* sound in both Pawnee dialects in a particular phonetic context. Some examples taken from the full list of cognates that are meant to illustrate Arikara *č* corresponding to Pawnee *k* follows:

Table 9: Cognates Illustrating Arikara *č*: South Band *k*: Skiri *k*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	č	*k*	*k*	
147	**č**iitíʾIš	ks**k**iítiʾiks	ks**k**iítiʾiks, ks**k**iítiks	‘four’
148	**č**iitiʾIštaánuʾ	ks**k**iitiʾikstaaruʾ	ks**k**iítikstaaruʾ	‘eighty’
150	š**č**iísuʾ	ks**k**iícuʾ	iks**k**iícuʾ	‘finger’
37	**č**iísuʾ	**k**iícuʾ	**k**iicuʾ	‘neck’
20	**č**iišuʾ	**k**iisuʾ	**k**iisuʾ	‘bone’
146	ni**č**iišuʾ	ri**k**iisuʾ	ri**k**iisuʾ	‘shelled corn’
156	**č**iis	**k**iic	**k**ic	‘be a liquid’, ‘be watery’
40	**č**iikaa	**k**iikaa	**k**iikaa	‘to drink’

Analysis

The conditioned pattern observed is that Arikara *č* corresponds to Pawnee *k* when it is immediately followed by the front vowels /i/, /ii/, /e/ or /ee/. This environment is formally represented by the following: k → č / __$V_{[+front]}$ or k → č / __{i(:), e(:)}. This means that proto *k* became *č* in Arikara when a front vowel, such as /i/, /ii/, /e/, or /ee/, immediately follows *k*. When this environment is met, Arikara *č* corresponds to South Band Pawnee *k* and Skiri Pawnee *k*. The sound change from *k* to *č* is known as palatalization. This simply means that the velar consonant *k*, which is non-palatal, changes into the palato-alveolar, or post-alveolar, affricate *č*. This type of change from *k* to *č* is typically triggered by the mid front and high front vowels /i/, /ii/, /e/, and /ee/. Based upon directionality it makes more sense for *k* to become *č* when followed by a front vowel, than it would for *č* to become *k*. In the examples provided above, the *č* in Arikara corresponds to the *k* in the South Band Pawnee and Skiri Pawnee dialects in the particular context that was described earlier. In Cognate Sets 37 and 20, the Arikara consonant *č* and Pawnee consonant *k* correspond in initial position in Arikara ***č****iísu*ʾ 'neck' and ***č****iíšu*ʾ 'bone' and initial *k* Pawnee ***k****iicu*ʾ 'neck' and ***k****iisu*ʾ 'bone'. The medial *č* in Arikara also corresponds to medial *k* in South Band Pawnee and Skiri Pawnee when a front vowel immediately follows Pawnee *k*. In Cognate Set 146, medial *č* in Arikara *ni****č****iišu*ʾ 'shelled corn' and medial *k* Pawnee *ri****k****iisu*ʾ 'shelled corn' correspond. While there were some examples of final *č* in Arikara that were found in the documentation, most were not always entirely cognate with Pawnee forms. In the Arikara examples that are not entirely cognate with Pawnee, final *–č*/*-tš* in Arikara,

which typically corresponds to the Pawnee diminutive suffix *–ki/-kis*, did not correspond to the Pawnee diminutive suffix *–ki*/*-kis*. In these instances, Pawnee utilizes an absolutive suffix, or a default case suffix, *-uˀ* that has been described in Parks 1972 and Parks 1976. An example of this is illustrated in Cognate Set 227 and a similar example is found in Cognate Set 21 in the appendix. Therefore, in Cognate Set 227 we can see that Arikara *xúhč*/*xúhtš* 'shoe, moccasin' and Pawnee *asuuruˀ* 'shoe, moccasin' are cognate, but the final morpheme is not the same in both languages. In Arikara, we see that the diminutive suffix *–č*/*-tš* is utilized to indicate that the noun is a small thing, while Pawnee utilizes the absolutive suffix *–uˀ* to indicate the noun is simply a noun. On the other hand, a couple of examples of final *č* in Arikara corresponding to a Pawnee form are in Cognate Sets 154 and 160. In these cognate sets, we see that Arikara *taRAhaaríč* 'buffalo horn spoon' and *neesíč* 'knife' corresponding to Pawnee *tarahaarik**i*** 'buffalo horn spoon' and *reeci**k**i* or *riici**k**i* 'knife'. Finally, the verb form, 'to drink', illustrated here is not a fully inflected verb because Pawnee verbs are obligatorily inflected, overtly or covertly, for mode/mood, person, number, aspect, and subordination (Parks 1976:144). Therefore, *čiikaa* or *kiikaa* 'to drink' is not an independent word.

Sound Correspondence 4: Arikara ˀ: South Band Pawnee ˀ: Skiri Pawnee ˀ

The glottal stop [ˀ] is found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the ˀ sound in Arikara corresponds to the ˀ sound in the Pawnee dialects in most instances; however, the exception to this will be

discussed at the end of this sound correspondence. Some examples taken from the full list of cognates that are meant to illustrate Arikara ˀ corresponding to Pawnee ˀ follows:

Table 10: Cognates Illustrating Arikara ˀ: South Band ˀ: Skiri ˀ

Cognate Set #	Arikara ˀ	South Band Pawnee ˀ	Skiri Pawnee ˀ	Gloss
19	paátuˀ	paatuˀ	paatuˀ	'blood'
20	čiíšuˀ	kiisuˀ	----------	'bone'
22	nipiíkuˀ	ripiikuˀ	ripiikuˀ	'egg'
30	haakáˀuˀ	aakaˀuˀ	haakaˀuˀ	'mouth'
76	tareeˀuux	tareeˀuus	tariiˀuus	'be blue'
115	atíˀAx	atiˀas	atiˀas	'my father'

Analysis

In the examples provided above, the glottal stop ˀ in Arikara typically corresponds to the glottal stop ˀ in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 30, 76, and 115, the medial glottal stop ˀ in the Arikara words or morphemes *haakáˀuˀ* 'mouth', *tareeˀuux* 'be blue', and *atíˀAx* 'my father' corresponds to the medial glottal stop ˀ in the Pawnee words or morphemes *aakaˀuˀ*/*haakaˀuˀ* 'mouth', *tareeˀuus*/*tariiˀuus* 'be blue', and *atiˀas* 'my father'. Additionally, the final glottal stop ˀ in Arikara typically corresponds to the final glottal stop ˀ in Pawnee. Cognate Sets 19, 20, 22, and 30 represent the final glottal stop ˀ in Arikara corresponding to the final glottal stop ˀ in Pawnee. On the other hand, the glottal stop in Arikara can correspond to Pawnee *t* on rare occasions. In Cognate Sets 106 and 107, the glottal stop ˀ in Arikara *atípaˀ* 'my grandfather' and *ápaˀ* 'your grandfather' corresponds to Pawnee *atipa**t*** 'my grandfather' and *apa**t*** 'your grandfather'. However, this is not a big issue, because the change from an alveolar stop, such as *t,* to a glottal

stop, such as ʾ, is a very common sound change. The glottal stop may simply be an allophone of the alveolar stop in these examples.

Sound Correspondence 5: Arikara *s*: South Band Pawnee *c*: Skiri Pawnee *c*

Similar to the affricate [*č*] in Arikara not corresponding to the Pawnee affricate [*c*], the voiceless alveolar fricative [*s*] found in Arikara does not correspond to the voiceless alveolar fricative [*s*] found in the South Band Pawnee and Skiri Pawnee sound inventories. Instead, the *s* sound in Arikara corresponds to the *c* sound in both Pawnee dialects. Some examples taken from the full list of cognates that are meant to illustrate Arikara *s* corresponding to Pawnee *c* follows:

Table 11: Cognates Illustrating Arikara *s*: South Band *c*: Skiri *c*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	s	*c*	*c*	
162	taWIšaápi**s**	tawíksaapi**c**	tawíksaapi**c**	‘eight’
150	ščií**s**uʾ	kskií**c**uʾ	ikskií**c**uʾ	‘finger’
140	ni**s**taakuʾ	ri**c**taakuʾ	ri**c**taakuʾ	‘back’, ‘dorsal region of the body’
306	**s**apiinaáNUx	**c**piiraarus	**c**piirarus	‘fly’, ‘housefly’
125	ána**s**	ara**c**	araa**c**	‘your brother (female speaking)’

Analysis

In the few examples provided above, the *s* in Arikara corresponds to the *c* in the South Band Pawnee and Skiri Pawnee dialects in all instances. The sound change from *c* to *s* is known as deaffrication. This simply means that Pawnee *c*, which is an affricate, lost its stop component and retained its continuant component, which resulted in the

fricative *s*. Based upon directionality it makes more sense for the affricate *c* to become the fricative *s* in Arikara, because at an earlier time Arikara and Pawnee would most likely have both had the affricate *c*. This is also supported by previous historical analyses of the Northern Caddoan languages (Chafe 1979; Parks 2001). In Cognate Set 306, initial *s* in Arikara ***s****apiinaáNUx* 'fly, housefly', initial *c* in South Band Pawnee ***c****piiraarus* 'fly, housefly', and initial *c* in Skiri Pawnee ***c****piirarus* 'fly, housefly' corresponds. As stated earlier, 'fly, housefly' is a cognate in Arikara and Pawnee, even though there is a vowel discrepancy in the first syllable between Arikara and Pawnee. This discrepancy is merely a case of elision. The medial *s* in Arikara also corresponds to medial *c* in South Band Pawnee and Skiri Pawnee. In Cognate Set 150 and 140, medial *s* in Arikara *šči****s****u'* 'finger' and *ni****s****taaku'* 'back, dorsal region of the body' and medial *c* in the Pawnee words *kski****c****u'* 'finger' and *ri****c****taaku'* 'back, dorsal region of the body' correspond. Final *s* in Arikara also corresponds to final *c* in both Pawnee dialects. In Cognate Sets 162 and 125, we clearly see that the final *s* in Arikara *taWIšaápi****s*** 'eight' and *ána****s*** 'your brother (female speaking)' corresponds to the final *s* in Pawnee *tawiksaapi****c*** 'eight' and *ara****c****/araa****c*** 'your brother (female speaking)'.

Sound Correspondence 6a: Arikara *x*: South Band Pawnee *s*: Skiri Pawnee *s*

The voiceless velar fricative [*x*] in Arikara corresponds to the voiceless alveolar fricative [*s*] in both Pawnee dialects. However, in addition to Arikara *x* corresponding to Pawnee *s*, the *š* sound in Arikara also corresponds to the *s* sound in both Pawnee dialects in a conditioned environment. Some examples taken from the full list of cognates that are meant to illustrate Arikara *x* corresponding to Pawnee *s* follows:

Table 12: Cognates Illustrating Arikara *x*: South Band *s*: Skiri *s*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	x	*s*	*s*	
152	A**x**čiísuˀ, **x**čiísuˀ	a**s**kiicuˀ	----------	‘toe’
4	á**x**kU**x**	a**s**ku(**s**)	a**s**ku(**s**)	‘one’
26	uú**x**uˀ	uu**s**uˀ	uu**s**uˀ	‘hair’
34	á**x**uˀ	a**s**uˀ	a**s**uˀ	‘foot’
76	tareeˀuu**x**	tareeˀuu**s**	tariiˀuu**s**	‘be blue’
114	šá**x**tiˀ	isa**s**tiˀ	isaa**s**tiˀ	‘her/his mother’

Analysis

The general pattern observed is that Arikara *x* corresponds to Pawnee *s* in most instances, except for the conditioned environment when Arikara *š* corresponds to Pawnee *s*. Arikara *x* corresponds to Pawnee *s* when it is immediately preceded by the vowels /a/, /aa/, /o/, /oo/, /u/ or /uu/, which are not front vowels. This environment is formally represented by the following: s → x / $V_{[-front]}$__ or s → x / {a(:), o(:), u(:)}__. This means that proto *s* became *x* in Arikara when the vowels, such as /a/, /aa/, /o/, /oo/, /u/, or /uu/, besides a front vowel immediately preceded *s*. In this more generalized environment compared to the particular environment in which *s* becomes *š*, the voiceless velar fricative *x* in Arikara corresponds to the voiceless alveolar fricative *s* in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 152, 4, 26, 34, 76, and 114, *x* in Arikara *A**x**čiísuˀ*/*x**x**čiísuˀ* ‘toe’, *á**x**kUx* ‘one’, *uú**x**uˀ* ‘hair’, *á**x**uˀ* ‘foot’, *tareeˀuu**x*** ‘be blue’, and *šá**x**tiˀ* ‘her/his mother’ correspond to *s* in the Pawnee words *a**s**kiicuˀ* ‘toe’, *a**s**ku* ‘one’, *uu**s**uˀ* ‘hair’, *a**s**uˀ* ‘foot’, *tareeˀuu**s***/*tariiˀuu**s*** ‘be blue’, and *isa**s**tiˀ*/*isaa**s**tiˀ* ‘her/his mother’. Finally, it is important to note that the descriptive verb

form, ‘be blue’, illustrated here is not an independent verb form as the adjective ‘blue’ is in English.

Sound Correspondence 6b: Arikara *š*: South Band Pawnee *s*: Skiri Pawnee *s*

Again, the voiceless alveolar fricative [*s*] found in Arikara does not correspond to the alveolar fricative [*s*] found in the South Band Pawnee and Skiri Pawnee sound inventories. Furthermore, the Arikara velar fricative or *x* sound is not the only sound that corresponds to the Pawnee alveolar fricative or *s* sound. The post-alveolar fricative or *š* sound in Arikara corresponds to the alveolar fricative or *s* sound in both Pawnee dialects in a particular phonetic/phonological environment. Some examples taken from the full list of cognates that are meant to illustrate Arikara *š* corresponding to Pawnee *s* follows:

Table 13: Cognates Illustrating Arikara *š*: South Band *s*: Skiri *s*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	š	*s*	*s*	
20	čii**š**uˀ	kii**s**uˀ	kii**s**uˀ	‘bone’
146	ničií**š**uˀ	rikii**s**uˀ	rikii**s**uˀ	‘shelled corn’
192	**š**tó, **š**toh	i**s**tu	i**s**tuˀ	‘again’
163	NAhee**š**á	----------	ráhii**s**a	‘tomorrow’

Analysis

The conditioned pattern observed is that Arikara *š* corresponds to Pawnee *s* when it is immediately preceded by the front vowels /i/, /ii/, /e/ or /ee/. This environment is formally represented by the following: s → š / $V_{[+front]}$__ or s → š / {i(:), e(:)}__. This means that *s* becomes *š* when a front vowel, such as /i/, /ii/, /e/, or /ee/, immediately precedes *s*. When this particular phonetic environment is met, the *š* in

Arikara corresponds to the *s* in the South Band Pawnee and Skiri Pawnee dialects. The sound change from *s* to *š* is also known as palatalization, but is slightly different than the other process of palatalization that changed the velar *k* to the palato-alveolar, or post-alveolar, consonant *č*. The process of palatalization that changes *s* to *š* simply changes the voiceless alveolar fricative *s* to the voiceless palato-alveolar, or post-alveolar, fricative *š*. The changes from *s* to *š* and from *k* to *č* are similar because they are triggered by the mid front and high front vowels /i/, /ii/, /e/, and /ee/. The difference in the environment is that *s* to *š* occurs when a front vowel, such as /i/, /ii/, /e/, or /ee/, immediately precedes *s*, while *k* to *č* occurs when a front vowel, such as /i/, /ii/, /e/, or /ee/, immediately follows *k*. This analysis is also supported by previous historical analyses of the Northern Caddoan languages (Chafe 1979; Parks 2001). In Cognate Sets 20, 146, 192, and 163, *š* in Arikara *čiiš**u***ʾ 'one', *ničiiš**u***ʾ 'shelled corn', ***š**tó/**š**toh* 'again', and *NAhee**š**á* 'tomorrow' and *s* in Pawnee *kii**s**u*ʾ 'bone', *rikii**s**u*ʾ 'shelled corn', *i**s**tu*/*i**s**tu*ʾ 'again', and *rahii**s**a* 'tomorrow' corresponds. In Cognate Set 192 'again', Arikara *š* still corresponds to Pawnee *s*, even though the Arikara and Pawnee word do not begin with the same sound. Again, the vowel *i* is simply an elided or deleted sound in Arikara, while it remained in Pawnee. Final *š* in Arikara also corresponds to final *s* in both Pawnee dialects sometimes. However, there are not very many examples of this because it is typically for final *s* to be deleted in Pawnee (Parks 1976:55-57,102). The few examples that illustrate this are in Cognate Sets 134 and 305. In these particular examples, we can clearly see that final *š* in Arikara *anát**š*** 'your grandchild' and *aniít**š*** 'calf/newborn calf' still corresponds to final *s* in the Pawnee words *araki**s*** 'your grandchild' and *ariiki**s***/*hariiki**s*** 'calf/newborn calf'. The few examples that illustrate

this correspondence word finally do not appear to be cognate, but they are indeed cognates. However, Arikara *tš* corresponding to Pawnee *kis* will be discussed later in Chapter 3 in Sound Correspondence 19.

Sound Correspondence 7a: Arikara *-h-*: South Band Pawnee *-h-*: Skiri Pawnee *-h-*

The voiceless laryngeal fricative [*h*] is found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the *h* sound in Arikara corresponds to the *h* sound in the Pawnee dialects in many instances; however, there are some exceptions to this. One of the exceptions will be discussed and illustrated in Sound Correspondence 6b. Some examples taken from the full list of cognates that are meant to illustrate Arikara medial *h* corresponding to Pawnee medial *h* follows:

Table 14: Cognates Illustrating Arikara *-h-*: South Band *-h-*: Skiri *-h-*

Cognate Set #	Arikara *h*	South Band Pawnee *h*	Skiri Pawnee *h*	Gloss
213	koxkA**h**aánuˀ	kuska**h**aaruˀ	kuska**h**aaruˀ	‘friendly visit’, ‘intertribal visit of friendship’
214	kuNA**h**úx, kuNAhús (little old man)	kura**h**us	kura**h**us	‘old man’
222	wiitaní**h**Ux	piitari**h**uks	piitari**h**uks	‘bachelor’
223	nikatI**h**aánuˀ	rikati**h**aaruˀ	rikati**h**aaruˀ	‘year’, ‘full cycle of the seasons’
260	koo**h**aánuˀ	kuu**h**aaruˀ	kuu**h**aaruˀ	‘prairie’, ‘valley’

Analysis

In the few examples provided above, the medial *h* in Arikara corresponds to the medial *h* in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 213, 214, 222, 223, and 260, medial *h* in the Arikara words *koxkA**h**aánuˀ* 'friendly visit', 'intertribal visit of friendship', *kuNA**h**úx* 'old man', *wiitaní**h**Ux* 'bachelor', *nikatI**h**aánuˀ* 'year', 'full cycle of the seasons', and *koo**h**aánuˀ* 'prairie', 'valley' directly corresponds to medial *h* in the Pawnee words *kuska**h**aaruˀ* 'friendly visit', 'intertribal visit of friendship', *kura**h**us* 'old man', *piitari**h**uks* 'bachelor', *rikati**h**aaruˀ* 'year', 'full cycle of the seasons', and *kuu**h**aaruˀ* 'prairie', 'valley'.

Sound Correspondence 7b: Arikara *h*-: South Band Pawnee *ø*-: Skiri Pawnee *h*-

In addition to Arikara *h* corresponding to Pawnee *h*, the word initial laryngeal fricative [*h*] in Arikara and Skiri Pawnee also correspond to a deletion of *h* word-initially in South Band Pawnee that results in *ø*-. Some examples taken from the full list of cognates that are meant to illustrate Arikara word-initial *h*- and Skiri Pawnee word-initial *h*- corresponding to South Band Pawnee word-initial *ø*- follows:

Table 15: Cognates Illustrating Arikara *h*-: South Band *ø*-: Skiri *h*-

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	h-	*ø*-	*h*-	
25	**h**iítuˀ	**ø**-iituˀ	**h**iituˀ	'feather'
30	**h**aakáˀuˀ	**ø**-aakaˀuˀ	**h**aakaˀuˀ	'mouth'
32	**h**aátuˀ	**ø**-aatuˀ	**h**aatuˀ	'tongue'
65	**h**unaánuˀ	**ø**-uraaruˀ	**h**uraaruˀ	'land', 'earth'
88	**h**utuúnuˀ	**ø**-uutuuruˀ	**h**uutuuruˀ	'wind'
219	**h**unaáˀuˀ	**ø**-uraaˀuˀ	**h**uraaˀuˀ	'snow'

Analysis

In the few examples provided above, the general pattern observed is that Arikara *h* corresponds to Pawnee *h*; however, word initial *h* is deleted in South Band Pawnee, while Arikara and Skiri Pawnee retain word initial *h*. This is formally represented by the following: h → ø / #__. This means that *h* becomes *ø*, null or nothing, when in word-initial position. When this environment is met, the initial *h* in Arikara and Skiri Pawnee corresponds to the word-initial null form, or *ø*, in South Band Pawnee. In Cognate Sets 25, 30, 32, 65, 88, and 219, word-initial *h* in the Arikara words ***h****iítuˀ* 'feather', ***h****aakáˀuˀ* 'mouth', ***h****aátuˀ* 'tongue', ***h****unaánuˀ* 'land', 'earth', ***h****utuúnuˀ* 'wind', and ***h****unaáˀuˀ* 'snow' correspond to the word-initial null form, or *ø*, in the South Band Pawnee words ***ø****-iituˀ* 'feather', ***ø****-aakaˀuˀ* 'mouth', ***ø****-aatuˀ* 'tongue', ***ø****-uraaruˀ* 'land', 'earth', ***ø****-uutuuruˀ* 'wind', and ***ø****-uraaˀuˀ* 'snow'. The Skiri Pawnee forms of these words are exactly like the South Band Pawnee forms, except the Skiri forms contain an *h-* where the South Band Pawnee form is *ø-*. Therefore, Skiri Pawnee initial *h* directly corresponds to Arikara *h* word initially, while South Band Pawnee does not.

Sound Correspondence 8a: Arikara -*w*-: South Band Pawnee -*w*-: Skiri Pawnee -*w*-

The bilabial labio-velar glide [*w*] is found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the *w* sound in Arikara corresponds to the *w* sound in the Pawnee dialects in most instances; however, the one exception to this will be discussed and illustrated in Sound Correspondence 7b. Some examples taken from the full list of cognates that are meant to illustrate Arikara medial *w* corresponding to Pawnee medial *w* follows:

Table 16: Cognates Illustrating Arikara *-w-*: South Band *-w-*: Skiri *-w-*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	w	*w*	*w*	
64	či**w**íhtuˀ	ki**w**iiktuˀ	ki**w**iktuˀ	‘sand’
69	naa**w**iíšuˀ	raa**w**isuˀ	raa**w**iisuˀ	‘smoke’
85	tá**W**It	ta**w**it	ta**w**it	‘three’
111	i**w**aaníRIš	i**w**aaririks	i**w**arіriks, i**w**ariiriks	‘her/his maternal uncle’
141	nikuta**w**ikúsuˀ	kuta**w**ikucuˀ	kuta**w**ikucuˀ	‘hawk’
273	xaa**w**iítA	----------	asa**w**iita	‘male horse’, ‘male dog’

Analysis

In the few examples provided above, the medial *w* in Arikara corresponds to the medial *w* in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 64, 69, 85, 111, 141, and 273, medial *w* in the Arikara words *či**w**íhtuˀ* ‘sand’, *naa**w**iíšuˀ* ‘smoke’, *tá**W**It* ‘three’, *i**w**aaníRIš* ‘her/his maternal uncle’, *nikuta**w**ikúsuˀ* ‘hawk’, and *xaa**w**iítA* ‘male horse’, ‘male dog’ corresponds to medial *w* in the Pawnee words *ki**w**iiktuˀ*/*ki**w**iktuˀ* ‘sand’, *raa**w**isuˀ*/*raa**w**iisuˀ* ‘smoke’, *ta**w**it* ‘three’, *i**w**aaririks*/*i**w**arіriks*/*i**w**ariiriks* ‘her/his maternal uncle’, *kuta**w**ikucuˀ* ‘hawk’, and *asa**w**iita* ‘male horse’, ‘male dog’. While Cognate Sets 141 and 273 are not entirely the same, they are in fact cognates. Again, there is simply a case of deletion affecting these cognate sets. In Cognate Set 141, the Arikara form appears to have preserved an initial syllable *ni-* or *ri-* that was deleted in the Pawnee dialects, while Arikara deleted the initial syllable *a* in Cognate Set 273. Furthermore, since *w* is not found word-finally, when *w* is found in Arikara it corresponds to *w* in Pawnee, except the instances discussed and illustrated in Sound Correspondence 8b. Finally, there are instances in

which word medial -*w*- in Arikara appears not to correspond to word medial -*w*- in Pawnee; however, in these instances, the correspondence appears word medially and in morpheme initial position as discussed and illustrated in Sound Correspondence 8b.

Sound Correspondence 8b: Arikara *w*-: South Band Pawnee *p*-/*w*-: Skiri Pawnee *p*-

The word initial bilabial labio-velar glide [*w*] in Arikara corresponds to the word initial voiceless bilabial stop [*p*] in South Band Pawnee and Skiri Pawnee. Additionally, word initial *w* in Arikara will in fact correspond to word initial *w* in South Band Pawnee; however, this is extremely rare. Some examples taken from the full list of cognates that are meant to illustrate Arikara initial *w* corresponding to Pawnee initial *w* follows:

Table 17: Cognates Illustrating Arikara *w*-: South Band *p*-/*w*-: Skiri *p*-

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	w-	*p*-/*w*-	*p*-	
168	**w**iináxtš, **w**iinásts (little boy)	**p**iiraski	**p**iiraski	‘boy’
170	**w**aawaapIsúxuˀ	----------	**p**aawaapicisuˀ	‘lightning’
171	**w**aáxIt	**p**aasit	**p**aasit	‘bat (mammal)’
172	**w**áh	**p**ah	**p**ah	‘elk’
174	**W**Ahúx	**p**ahuks	**p**ahuks	‘squash’, ‘pumpkin’
74	**w**aáˀuˀ	**p**aaˀuˀ	**p**aaˀuˀ	‘hill’, ‘mountain’

Analysis

In the few examples provided above, the initial *w* in Arikara corresponds to the initial *w* in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 168,

170, 171, 172, 174, and 74, initial *w* in the Arikara words ***w**iináxtš* 'boy', ***w**aawaapIsúxuˀ* 'lightning', ***w**aáxIt* 'bat (mammal)', ***w**áh* 'elk', ***W**Ahúx* 'squash', 'pumpkin', and ***w**aáˀuˀ* 'hill', 'mountain' corresponds to initial *p* in the Pawnee words ***p**iiraski* 'boy', ***p**aawaapicisuˀ* 'lightning', ***p**aasit* 'bat (mammal)', ***p**ah* 'elk', ***p**ahuks* 'squash', 'pumpkin', and ***p**aaˀuˀ* 'hill', 'mountain'. Finally, a single instance that represents Arikara word initial *w*- corresponding to South Band Pawnee word initial *w*- is in the Arikara word ***w**iiteešútš*/***w**iiteešúč* corresponding to the South Band Pawnee word ***w**iiteesutki*, but also pronounced ***p**iiteesutki* in South Band Pawnee and ***p**iitiisutki* in Skiri Pawnee (Parks 1976:52). While it appears as if this sound correspondence is only word initially, Cognate Sets 33, 153, 286, and 297 provide evidence that the sound correspondence is actually morpheme initial, because word medial *w* in the Arikara words *š**w**iítuˀ* 'fingernail', *Ax**w**iítuˀ*/*x**w**iítuˀ* 'toenail', *et**w**ás* 'spleen', and *Ax**w**iroóxuˀ* 'kidney' correspond to word medial *p* in the Pawnee words *iks**p**iituˀ* 'fingernail', *as**p**iituˀ* 'toenail', *et**p**ac*/*it**p**aac* 'spleen', and *as**p**iruusuˀ*/*s**p**iruusuˀ* 'kidney'.

Sound Correspondence 9a: Arikara *r*: South Band Pawnee *r*: Skiri Pawnee *r*

The alveolar tap [*r*] is found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the *r* sound in Arikara corresponds to the *r* sound in the Pawnee dialects. The exception to this is when Skiri Pawnee *hr* reduces to *h*. Some examples taken from the full list of cognates that are meant to illustrate Arikara *r* corresponding to Pawnee *r* follows:

Table 18: Cognates Illustrating Arikara *r*: South Band *r*: Skiri *r*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss

	r	*r*	*r*	
28	či**r**iíkuˀ	ki**r**iikuˀ	ki**r**iikuˀ	‘eye’
39	ka**r**iíkuˀ	ka**r**iikuˀ	ka**r**iikuˀ	‘liver’
76	ta**r**eeˀuux	ta**r**eeˀuus	ta**r**iiˀuus	‘be blue’
98	pita**r**uˀ	pita**r**uˀ	pita**r**uˀ	‘ant (generic)’
176	wá**R**Ux	pa**r**us	pa**r**us	‘rabbit (generic)’

Analysis

In the few examples provided above, the medial *r* in Arikara corresponds to the medial *r* in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 28, 39, 76, 98, and 176, medial *r* in the Arikara morphemes or words *či**r**iíkuˀ* ‘eye’, *ka**r**iíkuˀ* ‘liver’, *ta**r**eeˀuux* ‘be blue’, *pita**r**uˀ* ‘ant (generic)’, and *wá**R**Ux* ‘rabbit (generic)’ corresponds to medial *r* in the Pawnee morphemes or words *ki**r**iikuˀ* ‘eye’, *ka**r**iikuˀ* ‘liver’, *ta**r**eeˀuus*/*tarii**r**uus* ‘be blue’, *pita**r**uˀ* ‘ant (generic)’, and *pa**r**us* ‘rabbit (generic)’. Furthermore, since *r* is not found word-finally, when *r* is found in Arikara it will always correspond to *r* in Pawnee. Again, it is important to remember that the descriptive verb form, ‘be blue’ in Pawnee is not an independent adjective as the adjective ‘blue’ is in English.

Sound Correspondence 9b: Arikara *n*-: South Band Pawnee *r*-: Skiri Pawnee *r*-

The initial alveolar nasal [*n*] found in Arikara is not present in the sound inventory of South Band Pawnee and Skiri Pawnee. However, the initial alveolar nasal or *n* sound in Arikara corresponds to the initial alveolar tap or *r* sound in both Pawnee dialects. Some examples taken from the full list of cognates that are meant to illustrate initial *n* in Arikara corresponding to initial *r* in Pawnee follows:

Table 19: Cognates Illustrating Arikara *n*-: South Band *r*-: Skiri *r*-

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	n-	*r*-	*r*-	
13	**n**ačiriíkuˀ	**r**akiriikuˀ	**r**akiriikuˀ	‘seed’
22	**n**ipiíkuˀ	**r**ipiikuˀ	**r**ipiikuˀ	‘egg’
24	**N**Itkuúˀ	**r**itkuˀuˀ	**r**itkuˀuˀ	‘tail’
69	**n**aawiíšuˀ	**r**aawisuˀ	**r**aawiisuˀ	‘smoke’
80	**N**Itkahaánuˀ	**r**atkahaaruˀ	**r**atkahaaruˀ	‘night’

Analysis

In the few examples provided above, the initial *n* in Arikara corresponds to the initial *r* in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 13, 22, 24, 69, and 80, the initial *n* in the Arikara words ***n**ačiriíkuˀ* ‘seed’, ***n**ipiíkuˀ* ‘egg’, ***N**Itkuúˀ* ‘tail’, ***n**aawiíšuˀ* ‘smoke’, and ***N**Itkahaánuˀ* ‘night’ corresponds to the initial *r* in the Pawnee words ***r**akiriikuˀ* ‘seed’, ***r**ipiikuˀ* ‘egg’, ***r**itkuˀuˀ* ‘tail’, ***r**aawisuˀ*/***r**aawiisuˀ* ‘smoke’, and ***r**atkahaaruˀ* ‘night’. The reason why Arikara initial *n* corresponds to Pawnee initial *r* and is not a part of Sound Correspondence 10 is because an initial *r* is not found in Arikara. On the other hand, medial *r* and medial *n* are found in Arikara. This is evidence that initial *n* in Arikara is simply an allophone of Arikara *r* because they are in complementary distribution.

Sound Correspondence 10: Arikara *n*: South Band Pawnee *r*: Skiri Pawnee *r*

The alveolar nasal [*n*] found in Arikara is not present in the sound inventory of South Band Pawnee and Skiri Pawnee. However, the alveolar nasal or *n* sound in Arikara corresponds to the alveolar tap or *r* sound in both Pawnee dialects. Some

examples taken from the full list of cognates that are meant to illustrate Arikara *n* corresponding to Pawnee *r* follows:

Table 20: Cognates Illustrating Arikara *n*: South Band *r*: Skiri *r*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	n	*r*	*r*	
65	hu**n**aá**n**uˀ	u**r**aa**r**uˀ	hu**r**aa**r**uˀ	‘land’, ‘earth’
88	hutuú**n**uˀ	uutuu**r**uˀ	huutuu**r**uˀ	‘wind’
99	ta**n**ákaˀ	ta**r**ahaˀ	ta**r**ahaˀ	‘buffalo’
157	suú**n**ats (tiny girl), suú**n**atš (young girl), suú**n**axtš (12-15 girl)	cuu**r**aki	cuu**r**aki	‘girl’

Analysis

In the few examples provided above, the *n* in Arikara corresponds to the *n* in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 65, 88, 99, and 157, medial *n* in the Arikara words *hu**n**aá**n**u*ˀ ‘land’, ‘earth’, *hutuú**n**u*ˀ ‘wind’, *ta**n**áha*ˀ ‘buffalo’, and *suú**n**atš* ‘young girl’ corresponds to medial *r* in the Pawnee words u***r**aa**r**u*ˀ/*hu**r**aa**r**u*ˀ ‘land’, ‘earth’, *uutuu**r**u*ˀ/*huutuu**r**u*ˀ ‘wind’, *ta**r**aha*ˀ ‘buffalo’, and *cuu**r**aki* ‘girl’. Again, Cognate Sets 65, 88, 99, and 157 provide the evidence that Arikara *n* corresponding to Pawnee *r*, when it is not in initial position, represents a different sound correspondence and proto-sound because medial *n* and medial *r* both occur in Arikara, while only initial *n* occurs in Arikara. Furthermore, Cognate Set 157 is unusual because there are three separate words in the Arikara column that have slightly different meanings and slightly different pronunciations; nevertheless, the Arikara word is in fact cognate with the Pawnee word and the sound correspondence holds true. However, the subject of the reason for the different pronunciations and slightly different

meanings is discussed in the issues section of Chapter 5 under consonantal sound symbolism. Finally, since *n* is not found word-finally, when *n* is found in Arikara it will correspond to *r* in Pawnee.

Previously Established Vowel Correspondences

Again, this thesis greatly benefitted from previous diachronic studies of the Northern Caddoan languages. Vowel length is phonemic in the Arikara and Pawnee languages; however, there are some discrepancies between the languages in regards to long vowels. Therefore, the following table is the vowel sound correspondences, with optional length indicated, which have been established between Arikara and the two Pawnee dialects utilizing the repurposed comparative method:

Table 21: Arikara, South Band Pawnee, and Skiri Pawnee Vowel Correspondences

Arikara	South Band Pawnee	Skiri Pawnee
i(:)	i(:)	i(:)
e(:)	e(:)	i(:)
a(:)	a(:)	a(:)
o(:)	u(:)	u(:)
u(:)	u(:)	u(:)

Sound Correspondence 11: Arikara *i*: South Band Pawnee *i*: Skiri Pawnee *i*

Two high front unrounded vowels [*i*] and [*ii*] are found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the *i* and *ii* sound in Arikara corresponds to the *i* and *ii* sound in the Pawnee dialects. On occasion, there are some exceptions to this; however, these exceptions are unpredictable. Some examples taken from the full list of cognates that are meant to illustrate Arikara *i*(:) corresponding to Pawnee *i*(:) follow:

Table 22: Cognates Illustrating Arikara *i*(:): South Band *i*(:): Skiri *i*(:)

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	i(:)	*i*(:)	*i*(:)	
3	**č**i**t**uú**ʾ**U	k**i**tuu**ʾ**u**ʾ**	k**i**tuu**ʾ**u**ʾ**	'all'
5	p**í**tkUx	p**i**tku	p**i**tku	'two'
8	w**ii**ta	p**ii**ta	p**ii**ta	'man'
9	sáhn**i**š	cahr**i**ks	cah**i**ks	'person'
22	n**i**p**ii**ku**ʾ**	r**i**p**ii**ku**ʾ**	r**i**p**ii**ku**ʾ**	'egg'
105	**i**kaáni**ʾ**	**i**kaari**ʾ**	**i**kaari**ʾ**	'her/his grandmother'
280	**i**sataá**ʾ**u**ʾ**	**i**cataa**ʾ**u**ʾ**	**i**cataa**ʾ**u**ʾ**	'bread'

Analysis

In the few examples provided above, the *i*(:) in Arikara corresponds to the *i*(:) in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 3, 5, 8, 9, 22, 105 and 280, the *i*(:) in the Arikara words *č**i**tuú**ʾ**U* 'all', *p**í**tkUx* 'two', *w**ii**ta* 'man', *sáhn**i**š* 'person', *n**i**p**ii**ku**ʾ*** 'egg', ***i**kaán**i**ʾ* 'her/his grandmother' and ***i**sataá**ʾ**u**ʾ*** 'bread' directly corresponds to the *i* in the Pawnee words *k**i**tuu**ʾ**u**ʾ*** 'all', *p**i**tku* 'two', *p**ii**ta* 'man', *cahr**i**ks*/*cah**i**ks* 'person', *r**i**p**ii**ku**ʾ*** 'egg', ***i**kaar**i**ʾ* 'her/his grandmother' and ***i**cataa**ʾ**u**ʾ*** 'bread'. In most instances, these vowels will correspond between Arikara, South Band Pawnee, and Skiri Pawnee, but there are some exceptions; however, these exceptions are unpredictable.

Sound Correspondence 12: Arikara *e*: South Band Pawnee *e*: Skiri Pawnee *i*

The two mid front unrounded vowels [*e*] and [*ee*] are only found in the sound inventories of the Arikara language and the South Band Pawnee dialect. Therefore, Arikara and South Band Pawnee *e* and *ee* will correspond to Skiri Pawnee *i* and *ii*.

Some examples taken from the full list of cognates that are meant to illustrate Arikara *e*(:) and South Band Pawnee *e*(:) corresponding to Skiri Pawnee *i*(:) follow:

Table 23: Cognates Illustrating Arikara *e*(:): South Band *e*(:): Skiri *i*(:)

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	e(:)	*e*(:)	*i*(:)	
14	sč**ee**karaáku^{ʾ}	ksk**ee**karaaku^{ʾ}	ksk**ii**karaaku^{ʾ}	‘leaf’
38	**eé**tu^{ʾ}	**ee**tu^{ʾ}	**ii**tu^{ʾ}	‘breast’, ‘mammary gland’
70	č**ee**ká^{ʾ}u^{ʾ}	k**ee**ka^{ʾ}u^{ʾ} (flame)	k**ii**ka^{ʾ}u^{ʾ} (flame)	‘fire’
76	tar**ee**^{ʾ}uux	tar**ee**^{ʾ}uus	tar**ii**^{ʾ}uus	‘be blue’
87	n**eé**su^{ʾ}	r**ee**cu^{ʾ}	r**ii**cu^{ʾ}	‘intestine’
142	n**eé**tAkas, n**eé**tahkas, n**eé**tAhka	r**ee**tahkac	r**ii**tahkaac	‘eagle’

Analysis

In the few examples provided above, the *e* or *ee* in Arikara corresponds to the *e* or *ee* in South Band Pawnee and the *i* or *ii* in Skiri Pawnee. In Cognate Sets 14, 38, 70, 76, 87, and 142, the *e*(:) in the Arikara words or morphemes *sč**ee**karaáku*^{ʾ} ‘leaf’, ***eé**tu*^{ʾ} ‘breast’, ‘mammary gland’, *č**ee**ká*^{ʾ}*u*^{ʾ} ‘fire’, *tar**ee***^{ʾ}*uux* ‘be blue’, *n**eé**su*^{ʾ} ‘intestine’, *n**eé**tAkas*/*n**eé**tahkas*/*n**eé**tAhka* ‘eagle’ directly corresponds to the *e*(:) in the South Band Pawnee words or morphemes *ksk**ee**karaaku*^{ʾ} ‘leaf’, ***ee**tu*^{ʾ} ‘breast’, ‘mammary gland’, *k**ee**ka*^{ʾ}*u*^{ʾ} ‘flame’, *tar**ee***^{ʾ}*uus* ‘be blue’, *r**ee**cu*^{ʾ} ‘intestine’, and *r**ee**tahkac* ‘eagle’. In addition, the *e*(:) in these Arikara and South Band Pawnee words or morphemes correspond to the *i*(:) in the Skiri Pawnee words *ksk**ii**karaaku*^{ʾ} ‘leaf’, ***ii**tu*^{ʾ} ‘breast’, ‘mammary gland’, *k**ii**ka*^{ʾ}*u*^{ʾ} ‘flame’, *tar**ii***^{ʾ}*uus* ‘be blue’, *r**ii**cu*^{ʾ} ‘intestine’, and *r**ii**tahkaac* ‘eagle’. Moreover, it is important to note that previous historical work has established that *e* is typically the result of a vowel contraction between *a* and *i* (Chafe 1979:217-

218; Parks 2001:87). Finally, in most instances, these vowels will correspond between Arikara, South Band Pawnee, and Skiri Pawnee, but there are some exceptions; however, these exceptions are usually simply the result of phonological changes that mask the underlying form. One such exception is explained when proposing a Pawnee word for 'moose'.

Sound Correspondence 13: Arikara *a*: South Band Pawnee *a*: Skiri Pawnee *a*

Two mid-low central to back unrounded vowels [*a*] and [*aa*] are found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the *a* and *aa* sounds in Arikara correspond to the *a* and *aa* sounds in the Pawnee dialects. On occasion, there are some exceptions to this; however, it is unpredictable to determine these exceptions. Some examples taken from the full list of cognates that are meant to illustrate Arikara *a*(:) corresponding to Pawnee *a*(:) follow:

Table 24: Cognates Illustrating Arikara *a*(:): South Band *a*(:): Skiri *a*(:)

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	a(:)	*a*(:)	*a*(:)	
4	**á**xkUx	**a**sku	**a**sku	'one'
7	s**á**p**a**t	c**a**p**a**t	c**a**p**aa**t	'woman'
8	wiít**a**	piit**a**	piit**a**	'man'
12	x**aá**tš	as**aa**ki	**a**s**aa**ki	'dog'
19	p**aá**tuˀ	p**aa**tuˀ	p**aa**tuˀ	'blood'
31	**aá**nuˀ	**aa**ruˀ	**aa**ruˀ	'tooth'

Analysis

In the few examples provided above, the *a*(:) in Arikara corresponds to the *a*(:) in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 4, 7, 8, 12, 19, and 31, the *a*(:) in the Arikara words ***á**xkUx* 'one', *s**á**p**a**t* 'woman', *wiít**a*** 'man', *x**aá**tš*

'dog', ***paá**tuʾ* 'blood', and ***aá**nuʾ* 'tooth' directly corresponds to the *a*(:) in the Pawnee words ***a**sku* 'one', *c**a**p**a**t*/*c**a**p**aa**t* 'woman', *piit**a*** 'man', *as**aa**ki* 'dog', ***paa**tuʾ* 'blood', and ***aa**ruʾ* 'tooth'. In Cognate Sets 4 and 31, Arikara initial *a*(:) corresponds to Pawnee initial *a*(:). In Cognate Sets 7, 12, and 19, Arikara medial *a*(:) corresponds to Pawnee medial *a*(:). However, as can be seen in Cognate Set 7, vowel length does not stay consistent across the languages and dialects. Finally, Cognate Set 8 illustrates Arikara final *a*(:) corresponding to Pawnee final *a*(:). In most instances, these vowels will correspond between Arikara, South Band Pawnee, and Skiri Pawnee, but there are some exceptions: however, these exceptions are unpredictable.

Sound Correspondence 14: Arikara *o*: South Band Pawnee *u*: Skiri Pawnee *u*

Two mid back rounded vowels or []*o* and [*oo*] are only found in the sound inventory of the Arikara language; therefore, Arikara *o* or *oo* corresponds to the two high back rounded vowels or the *u* or *uu* sounds in the South Band Pawnee and Skiri Pawnee dialects. Some examples taken from the full list of cognates that are meant to illustrate Arikara *o*(:) corresponding to Pawnee *u*(:) follow:

Table 25: Cognates Illustrating Arikara *o*(:): South Band *u*(:): Skiri *u*(:)

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	o(:)	*u*(:)	*u*(:)	
48	k**oo**t	k**uu**t	k**uu**t	'to die'
94	naan**oó**kux	----------	rar**uu**kusuʾ	'singer'
192	št**ó**, št**o**h	ist**u**	ist**u**ʾ, sist**u**ʾ (obs.)	'again'
213	k**o**xkAhaánuʾ	k**u**skahaaruʾ	k**u**skahaaruʾ	'friendly visit', 'intertribal visit of friendship'
260	k**oo**haánuʾ	k**uu**haaruʾ	k**uu**haaruʾ	'prairie', 'valley'

297	Axwir**oó**xuˀ	aspir**uu**suˀ	spir**uu**suˀ	‘kidney’

Analysis

In the few examples provided above, the *o*(:) in Arikara corresponds to the *u*(:) in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 48, 94, 192, 213, 260, and 297, the *o*(:) in the Arikara words or morphemes *k**oo**t* ‘to die’, *naan**oó**kux* ‘singer’, *št**ó**/št**o**h* ‘again’, *k**o**xkAhaánuˀ* ‘friendly visit’, ‘intertribal visit of friendship’, *k**oo**haánuˀ* ‘prairie’, ‘valley’, and *Axwir**oó**xuˀ* ‘kidney’ directly corresponds to the *u*(:) in the Pawnee words or morphemes *k**uu**t* ‘to die’, *rar**uu**kusuˀ* ‘singer’, *ist**u**/ist**u**ˀ* ‘again’, *k**u**skahaaruˀ* ‘friendly visit’, ‘intertribal visit of friendship’, *k**uu**haaruˀ* ‘prairie’, ‘valley’, and *aspir**uu**suˀ/spir**uu**suˀ* ‘kidney’. In addition, it is important to note that previous historical work has established that *o* is often the result of a vowel contraction between *a* and *u* (Parks 2001:87-88).

Sound Correspondence 15: Arikara *u*: South Band Pawnee *u*: Skiri Pawnee *u*

Two high back rounded vowels [*u*] and [*uu*] are found in the Arikara, South Band Pawnee, and Skiri Pawnee sound inventories. Therefore, the *u* or *uu* sound in Arikara corresponds to the *u* or *uu* sound in the Pawnee dialects. On occasion, there are some exceptions to this; however, it is unpredictable to determine these exceptions. Some examples taken from the full list of cognates that are meant to illustrate Arikara *u*(:) corresponding to Pawnee *u*(:) follow:

Table 26: Cognates Illustrating Arikara *u*(:): South Band *u*(:): Skiri *u*(:)

Cognate Set #	Arikara *u*(:)	South Band Pawnee *u*(:)	Skiri Pawnee *u*(:)	Gloss

3	čit**uú**ʾ**U**	kit**uu**ʾ**u**ʾ	kit**uu**ʾ**u**ʾ	‘all’
26	**uú**x**u**ʾ	**uu**s**u**ʾ	**uu**s**u**ʾ	‘hair’
187	k**uú**N**U**x, k**uú**n**u**s (little bear)	k**uu**r**u**ks	k**ur**uks	‘bear (animal)’
219	h**u**naáʾ**u**ʾ	**u**raaʾ**u**ʾ	h**u**raaʾ**u**ʾ	‘snow’
88	h**utuú**n**u**ʾ	**uu**t**uu**r**u**ʾ	h**uu**t**uu**r**u**ʾ	‘wind’

Analysis

In the few examples provided above, the *u*(:) in Arikara corresponds to the *u*(:) in the South Band Pawnee and Skiri Pawnee dialects. In Cognate Sets 3, 26, 187, 219, and 88, the *u*(:) in the Arikara words *čit**uú**ʾ**U*** ‘all’, ***úx**u**ʾ*** ‘hair’, *k**uú**N**U**x* ‘bear’, *h**u**naáʾ**u**ʾ* ‘snow’, and *h**utuú**n**u**ʾ* ‘wind’ directly corresponds to the *u*(:) in the Pawnee words *kit**uu**ʾ**u**ʾ* ‘all’, ***uu**s**u**ʾ* ‘hair’, *k**uu**r**u**ks*/*k**ur**uks* ‘bear’, ***u**raaʾ**u**ʾ*/*h**u**raaʾ**u**ʾ* ‘snow’, and ***uutuu**r**u**ʾ*/*h**uutuu**r**u**ʾ* ‘wind’. In Cognate Set 26, Arikara initial *u*(:) corresponds to Pawnee initial *u*(:), while Arikara medial *u*(:) corresponds to Pawnee medial *u*(:) in Cognate Sets 3, 26, 187, 219, and 88. However, as can be seen in Cognate Set 187, vowel length does not stay consistent across the languages and dialects. Finally, in most instances, these vowels will correspond between Arikara, South Band Pawnee, and Skiri Pawnee, but there are some exceptions; however, these exceptions are unpredictable.

Newly Established Sound Correspondences: Consonant Clusters

Although this thesis greatly benefitted from previous diachronic studies of the Northern Caddoan languages, these established sound correspondences did not account for consonant cluster correspondences between Arikara, South Band Pawnee, and Skiri Pawnee. Therefore, in order to make the comparative method a more useful tool for

Pawnee language revitalization efforts, I have postulated a few of these consonant cluster correspondences, based upon what I have observed in the Cognate Sets.

Sound Correspondence 16a: Arikara *x*: South Band Pawnee *ks*: Skiri Pawnee *ks*

In addition to the velar fricative [*x*] in Arikara corresponding to the alveolar fricative or *s* sound in South Band Pawnee and Skiri Pawnee, the velar fricative *x* also corresponds to the consonant cluster *ks* in South Band Pawnee and Skiri Pawnee. Some examples taken from the full list of cognates that are meant to illustrate Arikara *x* corresponding to the Pawnee consonant cluster *ks* follows:

Table 27: Cognates Illustrating Arikara *x*: South Band *ks*: Skiri *ks*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	x	*ks*	*ks*	
27	pá**x**uˀ	pa**ks**uˀ	pa**ks**uˀ	‘head’
174	WAhú**x**	pahu**ks**	pahu**ks**	‘squash’
175	wahU**x**anaáxuˀ	pahu**ks**araasuˀ	pahu**ks**araasuˀ	‘watermelon’
182	šihU**x**	sihu**ks**	suhu**ks**	‘five’
183	šihu**x**taánuˀ	sihu**ks**taaruˀ	suhu**ks**taaruˀ	‘one hundred’
187	kuúNU**x**, kuúnus (little bear)	kuuru**ks**	kuru**ks**	‘bear (animal)’
218	čítU**x**	kitu**ks**	kitu**ks**	‘beaver’
268	waaru**x**tii	waaru**ks**tii	waaru**ks**tii	‘be holy’

Analysis

The general pattern observed between Pawnee *ks* and Arikara *x* is that it closely resembles Arikara *x* corresponding to Pawnee *s*. However, it is difficult to know the motivation for *ks* becoming *x*, because this does not appear to be a very common sound change in the languages of the world. It makes more sense based on directionality that the consonant cluster *ks* would have been present historically, because it is even more

difficult to account for the insertion of a *k* before *s* from a historical and phonological perspective. Therefore, it can be assumed that *ks* eventually became *x* in Arikara, but the question that remains is did this take place in one or more steps? It is probably the case that this change took place in more than a single step because the sound correspondence between Arikara *x* and Pawnee *s* and Arikara *x* and Pawnee *ks* appear in the exact same environment. Thus, it seems probable that *ks* first became *s*, then *s* became *x*. Some possible evidence for this particular change from *ks* to *s*, then from *s* to *x* is found in only a couple examples in Cognate Sets 14 and 289. In Cognate Set 14 and 289, initial *s* in the Arikara words ***s****čeekaraáku*ʾ 'leaf' and ***s****čeekáhtš* 'gnat' corresponds to the initial consonant cluster *ks* in the Pawnee words ***ks****keekaraakuʾ*/***ks****kiikaraakuʾ* 'leaf' and ***ks****keekahki*/***ks****kiikahki* 'gnat'. However, as previously established in the sound correspondences, Arikara *s* corresponds to Pawnee *c* and the Pawnee alveolar affricate *c* could possibly be misinterpreted as the Pawnee consonant cluster *ks*, because they both have a stop component followed by a continuant component. Nevertheless, the general pattern observed is that Arikara *x* corresponds to Pawnee *ks*. However, it is necessary to state the environment because Arikara *š* corresponds to Pawnee k*s* in a particular environment. Therefore, Arikara *x* corresponds to Pawnee k*s* when it is immediately preceded by any other vowels, such as /a/, /aa/, /o/, /oo/, /u/ or /uu/, besides the front vowels. In Cognate Sets 27, 175, 183, and 268, the medial *x* in the Arikara words or morphemes *pá****x****u*ʾ 'head', *wahU****x****anaáxu*ʾ 'watermelon', and *šihU****x****taánu*ʾ 'one hundred', and *waaru****x****tii* 'be holy' correspond to the medial consonant cluster *ks* in the Pawnee words or morphemes *pa****ks****u*ʾ 'head', *pahu****ks****araasu*ʾ 'watermelon', *sihu****ks****taaruʾ*/*suhu****ks****taaruʾ* 'one hundred', and *waaru****ks****tii* 'be holy'. In Cognate Sets

174, 182, 187, and 218, the final *x* in the Arikara words *WAhú**x*** ‘squash’, ‘pumpkin’, *šíhU**x*** ‘five’, *kuúNU**x*** ‘bear (animal)’, and *čítU**x*** ‘beaver’ correspond to the final *ks* in the Pawnee words *pahu**ks*** ‘squash’, ‘pumpkin’, *sihu**ks***/*suhu**ks*** ‘five’, *kuuru**ks***/*kuru**ks*** ‘bear (animal)’, and *kitu**ks*** ‘beaver’.

Sound Correspondence 16b: Arikara *š*: South Band Pawnee *ks*: Skiri Pawnee *ks*

In addition to the post-alveolar fricative [*š*] in Arikara corresponding to the alveolar fricative [*s*] in South Band Pawnee and Skiri Pawnee, *š* also corresponds to the consonant cluster *ks* in South Band Pawnee and Skiri Pawnee. Some examples taken from the full list of cognates that are meant to illustrate Arikara *š* corresponding to the Pawnee consonant cluster *ks* follows:

Table 28: Cognates Illustrating Arikara *š*: South Band *ks*: Skiri *ks*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	š	*ks*	*ks*	
9	sáhni**š**	cahri**ks**	cahi**ks**	‘person’
33	**š**wiítuˀ	i**ks**piituˀ	----------	‘fingernail’
36	íšuˀ	i**ks**uˀ	----------	‘hand’
97	niíšuˀ	rii**ks**uˀ	rii**ks**uˀ	‘arrow’
150	**š**čiísuˀ	**ks**kiicuˀ	i**ks**kiicuˀ	‘finger’
186	te**š**kúNIt	te**ks**kurit	ti**ks**kurit	‘nearby’, ‘close by’

Analysis

The general pattern observed between Pawnee *ks* and Arikara *š* is that it closely resembles the conditioned environment in which Arikara *š* corresponds to Pawnee *s* when it is immediately preceded by the front vowels /i/, /ii/, /e/ or /ee/. Earlier it was suggested that *ks* first became *s*, then *s* became *x* based on a couple of examples in

Cognate Sets 14 and 289 in which Pawnee *ks* corresponded to Arikara *s*. Next, Arikara *x* must have become Arikara *š* when it is immediately preceded by the front vowels /i/, /ii/, /e/, or /ee/. Therefore, when this environment is met, Arikara *š* corresponds to the Pawnee consonant cluster *ks*. In Cognate Sets 9, 33, 36, 97, 150, and 186, *š* in the Arikara words *sáhni**š*** 'person', ***š**wiítuˀ* 'fingernail', *íš**u**ˀ* 'hand', *niíš**u**ˀ* 'arrow', ***š**čiísuˀ* 'finger', and *teškúNIt* 'nearby', 'close by' correspond to the consonant cluster *ks* in the Pawnee words *cahri**ks**/cahi**ks*** 'person', *i**ks**piitu**ˀ* 'fingernail', *i**ks**u**ˀ* 'hand', *rii**ks**u**ˀ* 'arrow', ***ks**kiicuˀ/i**ks**kiicuˀ* 'finger', and *te**ks**kurit/ti**ks**kurit* 'nearby', 'close by'. The medial sound correspondence between Arikara *š* and the Pawnee consonant cluster *ks* is represented in Cognate Sets 33, 36, 97, 150, and 186, while the final correspondence between these sounds is represented in Cognate Set 9. Finally, Cognate Sets 33 and 150 represent the initial sound correspondence between Arikara *š* and the Pawnee consonant cluster *ks*, even though this statement is not entirely true because Arikara *š* must be or must have been preceded by a front vowel in order for this sound to exist in Arikara. Therefore, when this vowel does not precede Arikara *š* as in Cognate Sets 33 and 150, we know that this vowel must have been deleted only after this particular environment conditioned the sound change. The explicit evidence for this exists in the word initial *i* found in the South Band Pawnee example *ikspiituˀ* 'fingernail' in Cognate Set 33 and the word initial *i* found in the Skiri Pawnee example *ikskiicuˀ* 'finger' in Cognate Set 150.

Sound Correspondence 17: Arikara *ht*: South Band Pawnee *kt*: Skiri Pawnee *kt*

In addition to the voiceless velar stop [*k*] and the post-alveolar affricate [*č*] in Arikara corresponding to the velar stop or *k* sound in South Band Pawnee and Skiri Pawnee, the Arikara consonant cluster *ht* corresponds to the South Band and Skiri Pawnee consonant cluster *kt*. Some examples that illustrate this consonant cluster correspondence follow:

Table 29: Cognates Illustrating Arikara *ht*: South Band *kt*: Skiri *kt*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	ht	*kt*	*kt*	
64	čiwí**ht**uˀ	kiwii**kt**uˀ	kiwi**kt**uˀ	‘sand’
144	waawa**ht**íhkux	paawa**kt**iku	paawa**kt**ikus	‘talker (someone who likes to talk, talks a lot)’
71	Itkanaa**ht**uúsuˀ, Itkana**ht**uúsuˀ	kará**kt**uhcuˀ	karaá**kt**uuhcuˀ, kára**kt**uhcuˀ	‘ashes’
188	taNI**ht**áˀuˀ	tari**kt**aˀuˀ	tari**kt**aˀuˀ	‘body’

Analysis

The general pattern observed is that Arikara *h* corresponds to Pawnee *k*, when it is immediately followed by *t*. Therefore, the Arikara consonant cluster *ht* corresponds to the South Band Pawnee and Skiri Pawnee consonant cluster *kt*. This environment is formally represented by the following: k → h / __t. This simply means that *k* becomes *h* when it is immediately followed by *t*. Therefore, when this particular environment is met, Arikara *h* corresponds to South Band Pawnee *k* and Skiri Pawnee *k*. Based upon directionality it makes more sense for *k* to become *h* , than it would for *h* to become *k*. In the examples provided above, the *h* in Arikara corresponds to the *k* in the South Band Pawnee and Skiri Pawnee dialects in the particular context that was described earlier. In

Cognate Sets 64, 144, 71, and 188, *h* in the Arikara words *čiwí**h**tuˀ* ‘sand’, *waawahtí**h**kux* ‘talker (someone who likes to talk)’, *Itkana**h**tuúsuˀ* ‘ash’, and *taNI**h**táˀuˀ* ‘body’ corresponds to the *k* in the Pawnee words *kiwii**k**tuˀ*/*kiwi**k**tuˀ* ‘sand’, *paawa**k**tiku*/*paawa**k**tikus* ‘talker (someone who likes to talk)’, *kara**k**tuhcuˀ*/*karaa**k**tuuhcuˀ* ‘ash’, and *tari**k**taˀuˀ* ‘body’. There were a couple of instances in which the Pawnee consonant cluster *kt* did not correspond to the Arikara consonant cluster *ht*. These examples occurred in Cognate Sets 108 and 135. In Cognate Sets 108 and 135, the consonant cluster *kt* in the Pawnee words *ipa**kt**iˀ*/*ipaa**kt**iˀ* ‘her/his grandfather’ and *ra**kt**iki*/*ra**kt**iiki* ‘her/his grandchild’ does not correspond to the consonant cluster *ht* in the Arikara words *ipá**hn**iˀ* ‘her/his grandfather’ and *iNA**hn**ítš* ‘her/his grandchild’. However, since these are kinship terms, when we analyze Cognate Sets 103-135, there are noticeable patterns in the third person kinship terms suggesting that they are marked for possession. Therefore, upon observation of the other kinship terms in the first and second persons, it becomes clear that kinship terms are composed of more than one morpheme. It becomes easy to surmise that the phonology is different in Arikara and Pawnee; hence, the difference in the surface forms. It appears that the Arikara kinship terms show that the underlying consonant cluster *kn* is phonetically realized as Arikara *hn*, while the Pawnee kinship terms show how the consonant cluster *kr* is treated underlyingly to produce the phonetic realization of Pawnee *kt*. This is supported by previous linguistic analyses of Pawnee kinship terms in which the third person possessor for kinship terms is a discontinuous form *i-…-riˀ* (Parks 1976; Parks 2008).

Sound Correspondence 18: Arikara *ts*: SB Pawnee kic: SK Pawnee kic

One of the consonant cluster correspondences, which has been observed but not entirely understood, is word initial ts in Arikara corresponding to word initial *kic* in the Pawnee language. Therefore, in addition to Arikara *t* corresponding to Pawnee *t*, the Arikara consonant cluster *ts* in word initial position corresponds to Pawnee *kic* word initially. Some examples that illustrate this correspondence follow:

Table 30: Cognates Illustrating Arikara *ts*-: South Band *kic*-: Skiri *kic*-

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	ts-	*kic*-	*kic*-	
196	**ts**kaˀáhnIš, **ts**kaˀaáhniš, **ts**kaˀaáhNIš	**kic**kaˀaahris	**kic**kaˀaahis	‘shoulder blade’
308	**ts**kaaxíšuˀ	**kic**kaasisuˀ	**kic**kaasisuˀ, **kic**kaasuˀ	‘sweat’, ‘perspiration’
309	**ts**hunúxuˀ	**kic**ahuruksuˀ	**kic**ahuruksuˀ	‘scalped person’, ‘scalped man (cultural character)’

Analysis

The general pattern observed is that Arikara *ts*- corresponds to Pawnee *kic*- word initially. A basic observation is that Arikara *s* still corresponds to Pawnee *c* in these cases. Additionally, it is possible that Sound Correspondence 3b accounts for Arikara *k* changing to *č* when the front vowel *i* still followed *k* at some time in the past. Subsequently, devoicing or elision would account for the lack of a vowel between what would have been *k* and *s* at some time in the past in Arikara. Notice that the syllable that undergoes this change in Arikara is not stressed. Finally, deaffrication of *č* to *t* when immediately followed by an *s* in Arikara would account for the present attested form.

However, this is just speculation and the Arikara sound change from *k* to *t* in *kic-* to *ts-* is not entirely understood at this moment. This sound change is very similar to the sound correspondence observed in Sound Correspondence 19. While the reason is not understood for this sound change, the sound correspondence is useful for language revitalization purposes.

Sound Correspondence 19: Arikara *tš*: South Band Pawnee *kis*: Skiri Pawnee *kis*

Another consonant cluster correspondence, which has been observed but not entirely understood, is tš in Arikara corresponding to *kis* in the Pawnee language. Therefore, in addition to Arikara *t* corresponding to Pawnee *t*, the Arikara consonant cluster *tš* corresponds to Pawnee *kis*. Some examples that illustrate this correspondence follow:

Table 31: Cognates Illustrating Arikara *tš*: South Band *kis*: Skiri *kis*

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
	tš	*kis*	*kis*	
18	tsás**tš**, tšásč (archaic pronunciation)	kisac**ki(s)**	kisaac**ki(s)**	‘meat’
134	anát**tš**	ara**kis**	ara**kis** (obs.)	‘your grandchild’
193	**tš**ús	**kis**uc	**kis**uc	‘grape’
194	**tš**usčiísuˀ	**kis**uckiicuˀ	**kis**uckiicuˀ	‘grape juice’
195	**tš**aátuˀ, **tIš**aátuˀ	**kis**aatuˀ	katuuractaaka	‘swan’
235	**tš**uúxIt ‘also carrot’	**kis**uusit ‘any edible root, such as carrot, radish, beet’	**kis**uusit	‘Jerusalem artichoke’
305	aniít**tš**	arii**kis**	harii**kis**	‘calf’, ‘newborn calf’

Analysis

The general pattern observed is that Arikara *tš* corresponds to Pawnee *kis*. A basic observation is that Arikara *š* still corresponds to Pawnee *s* in these cases. Additionally, it is possible that Sound Correspondence 6b accounts for Arikara *k* changing to *č* when the front vowel *i* still followed *k* at some time in the past. Subsequently, devoicing or elision would account for the lack of a vowel between what would have been *k* and *š* at some time in the past in Arikara. Notice that the syllable that undergoes this change in Arikara is not stressed. Finally, deaffrication of *č* to *t* in Arikara would account for the present attested form. Again, this is just speculation and the Arikara sound change from *k* to *t* in *kis* to *tš* is not entirely understood at this moment. This sound change is very similar to the sound correspondence observed in Sound Correspondence 18. As stated earlier for Sound Correspondence 18, while the reason is not understood for this sound change, the sound correspondence is still useful for language revitalization purposes.

Chapter 4: Repurposing the Comparative Method for Pawnee Language and Dialect Revitalization

Introduction

The comparative method is not being utilized for conventional purposes in this thesis. Instead, the comparative method is repurposed to propose words for Pawnee language and dialect revitalization. With that being stated, the method remains essentially the same. The exceptions are some steps are not utilized since the need or purpose has changed. Therefore, the reconstruction of proto-sounds, checking the plausibility of reconstructed sounds from the perspective of the overall phonological inventory of the proto-language, and checking the plausibility of the reconstructed sounds from the perspective of linguistic universals and typological expectations, as outlined by Campbell 2013, are not utilized in this thesis because there is not an immediate need for historical or diachronic linguistics, or the study of language change over time, and the reconstruction of proto-sounds in Pawnee language revitalization. Nevertheless, this thesis greatly benefitted from previous diachronic studies of the Northern Caddoan languages that established proto-sounds for Proto-Northern Caddoan.

Repurposed Comparative Method

The steps of the repurposed comparative method are very similar to the steps described in Campbell 2013. Steps one and two of the repurposed comparative method are essentially the same as the steps outlined in Campbell 2013. In order to utilize the comparative method as a language revitalization tool, it is necessary to begin by compiling cognates and establishing sound correspondences and in this particular order.

Furthermore, step three of the repurposed comparative method is the same as step four as outlined in Campbell 2013. In this step it is important to understand which correspondence sets are partially overlapping or in complementary distribution with one another. Steps four and five in the process of utilizing the comparative method as a language revitalization tool are also important, but there is not a particular order in these steps because they are accomplished almost simultaneously. These steps are analyzing the morphemes and phonology found in the cognate sets and adhering to Pawnee phonology during the construction and proposal of new Pawnee words.

Proposed Pawnee Words Utilizing the Repurposed Comparative Method

In order to construct and propose words for Pawnee language revitalization, it is first necessary to utilize the comparative method in the steps that have been outlined. The first three steps of this repurposed comparative method have been demonstrated in Chapter 3. First, an Arikara and Pawnee cognate list was compiled. Then, Arikara and Pawnee sound correspondences were established. Next, it was determined which sound correspondence sets were partially overlapping or in complementary distribution with one another. However, it is not always this simple because of the fusional nature of Arikara and Pawnee, which can make morphemes undergo complex sound changes in word formation. Therefore, it is necessary to analyze words to determine the morphemes, or meaningful parts, which make up a word and the sound changes that take place in each particular language or dialect during word formation. A morphemic and phonological analysis is essential to ensure the linguistic accuracy of a proposed word in these languages or dialects. To illustrate the method, I propose Pawnee words

for the following lexical items: ‘moose’, ‘camel’, ‘cucumber’, ‘raisin’ ‘bread’, and the verbal word ‘he represents me’. My proposals are based on the existing documentation of Arikara, South Band Pawnee, and Skiri Pawnee. I analyze complex Arikara words, find cognate morphemes in either South Band Pawnee or Skiri Pawnee and then use my comparative analysis of the three varieties to construct new complex words in Pawnee. This novel use of the comparative method is not a reconstruction of proto forms, but rather a construction of novel forms that conform to Pawnee morphophonemic rules.

Therefore, in order to construct and propose Pawnee words for ‘moose’, ‘camel’, ‘cucumber’, ‘raisin bread’, and a verbal word for ‘he represents me’ or ‘he stands up for me’, it was necessary to morphologically and phonologically analyze Cognate Sets 230, 172, 173, 29, 279, 268, 231, 239, 282, 277, 236, 232, 174, 76, 234, 280, 193, 194, 353, 317, 334, 337, 340, 351, and 352.

Demonstrating Steps Four, Five, and Six of the Repurposed Comparative Method

In order to construct a word for ‘moose’ in Pawnee, it is necessary to utilize the comparative method in the steps that have been outlined. The first three steps of this repurposed comparative method have been demonstrated in Chapter 3. First, an Arikara and Pawnee cognate list was compiled. Then, Arikara and Pawnee sound correspondences were established. Next, it was determined which sound correspondence sets were partially overlapping or in complementary distribution with one another. In many cases, as will be illustrated later, this will allow for the accurate construction of a Pawnee word; however, this word in particular was not as simple to construct because of the fusional nature of Arikara and Pawnee, which can make

morphemes undergo complex sound changes in word formation. At first, the fusional nature of Arikara and Pawnee made it difficult to isolate the Arikara morphemes, which are cognate with Pawnee; however, the sound changes where the morphemes come together in word formation gave away the underlying morphemes in Arikara. The previous historical work that established that *e* is typically the result of a vowel contraction between *a* and *i* was particularly useful to the construction of a Pawnee word for 'moose' (Chafe 1979:217-218; Parks 2001:87). The following table represents the Arikara and Pawnee cognates that were necessary for the construction of a Pawnee word for 'moose':

Table 32: Cognates Utilized to Propose a Pawnee Word for 'moose'

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
230	weesUxárut	----------	----------	'moose'
172	wáh	pah	pah	'elk'
173	weehániˀ	----------	paahariˀ	'young elk', 'elk calf'
29	sⁱniítuˀ, (suxčítA long-nosed), súxuˀ 'lip'	cuusuˀ	cusuˀ	'nose'
279	arut	arut	arut	'be soft'
298	isuxa	icusa	icusa	'to puff', 'to snort'

Morphemic and Phonological Analysis

The Arikara word for moose is unattested in both Pawnee dialects; therefore, I have utilized the comparative method to base the Pawnee word on the attested Arikara word. By simply utilizing the established sound correspondences, one would incorrectly assume that the South Band Pawnee form would simply be **peecusarut* and the Skiri Pawnee form would simply be **piicusarut*; however, this is not the case. Based upon a clue from previous historical work which established that *e* is typically the result of a

vowel contraction between *a* and *i*, I operated on the assumption that *wáh* ‘elk’, perhaps *waa* ‘elk’, was the first underlying morpheme of the Arikara word for ‘moose’ (Chafe 1979; Parks 2001). I operated on this assumption because of what I observed in Cognate Set 173 between Arikara *weehániˀ* ‘elk calf’, Skiri Pawnee *paahariˀ* ‘elk calf’, and no attested form for South Band Pawnee from the AISRI Online Dictionary Portal. Cognate Set 173 was evidence for *e* being a vowel contraction between *a* and *i* in Arikara. However, Cognate Set 172 shows that the Arikara word *wáh* ‘elk’ has a final *h*. Nevertheless, it is possible that the voiceless laryngeal fricative *h* can be ignored in Arikara phonology or it may be deleted in a particular context. Subsequently, this deletion of Arikara final *h* in *wáh* ‘elk’ would leave the vowel *a* and *i* open to vowel contraction. Next, Cognate Set 29 posed an issue when I was first compiling this cognate list because the Arikara word for nose is *s^{i}niítuˀ*, while it is *cuusuˀ*/*cusuˀ* in Pawnee. These forms are not cognate; however, after doing some more searching in the AISRI Online Dictionary Portal I came across these other forms *suxčítA* ‘long-nosed’ and *súxuˀ* ‘lip’, which are very similar to the Pawnee forms. Semantic drift or narrowing would account for the slight discrepancy in meaning between the latter Arikara forms corresponding to the Pawnee forms. Additionally, Cognate Set 298 has a similar meaning having to do with the nose and it provides evidence that there is an *i* before *cusuˀ*/*cuusuˀ* that helps to account for the vowel contraction in Arikara. So far, this analysis accounts for the form or shape **weesux*. Finally, Cognate Set 279 *arut* ‘be soft’ is the most straightforward of these morphemes comprising the Arikara word ‘moose’.

Arikara

weesUxárut

wah-isux-arut

elk-nose-soft

‘moose’

Proposed Pawnee Word for Moose

Based upon the clues left from Arikara phonological changes taking place, I feel confident in saying that Arikara *weesUxárut* ‘moose’ is comprised of three morphemes, which are cognate to the Pawnee morphemes. Therefore, a Pawnee word for ‘moose’ can be accurately constructed based upon the attested form and the phonological and morphological analysis of the Arikara word. The first Arikara morpheme is *wah* ‘elk’. The next Arikara morpheme is *isux* ‘nose’ and the final Arikara morpheme is *arut* ‘soft’. Together these morphemes combine to make the Arikara word *weesUxárut* ‘moose’. The literal meaning is a ‘soft nosed elk’. Therefore, based on this analysis a South Band Pawnee and Skiri Pawnee word for ‘moose’ can be constructed because these are cognates or morphemes that are shared between Arikara and Pawnee. The Arikara morpheme *wah* ‘elk’ corresponds to the Pawnee morpheme *pah* ‘elk’, while the Arikara morpheme *isux* ‘nose’ corresponds to the Pawnee morpheme *icus* ‘nose’. The final Arikara morpheme *arut* ‘soft’ corresponds to the Pawnee morpheme *arut* ‘soft’.

Arikara	SB Pawnee	SK Pawnee
weesUxárut	**paacusarut**	**paacusarut**
wah-isux-arut	pah-icus-arut	pah-icus-arut
elk-nose-soft	elk-nose-soft	elk-nose-soft
‘moose’	‘moose’	‘moose’

While these morphemes are shared between Arikara and Pawnee, the proposed Pawnee word for 'moose' must adhere to each Pawnee dialect's particular phonology. Based upon observations from Cognate Sets 172 and 173, the Skiri Pawnee form for 'moose' will not approximate the Arikara form based upon the phonological evidence attained from Cognate Set 173. Unlike the Arikara form for 'elk calf', Skiri Pawnee phonology does not ignore or delete the voiceless laryngeal fricative in this particular context. If Skiri Pawnee phonology approximated the Arikara phonology, we might expect the Skiri Pawnee form for 'elk calf' to be **piihari'*; however, the actual form is *paahari'* 'elk calf'. Therefore, we can assume based upon this phonological evidence that when *pah* 'elk' and i*cus* 'nose' combine, it will produce the form **paacus*. When the final morpheme *arut* 'soft' combines, it results in the newly constructed Skiri Pawnee word ***paacusarut*** 'moose', literally 'soft nosed elk'.

At first it was difficult to be certain what a linguistically accurate South Band Pawnee form for 'moose' should be because there was not an attested South Band Pawnee form for Cognate Set 173 'elk calf' in the AISRI Online Dictionary Portal. Cognate Set 173 was particularly important for a South Band Pawnee form because it would show if *h* was deleted in this particular context, which allows *a* and *i* to contract to *e* as is the case in Arikara, or if the form corresponded to the Skiri Pawnee form. Without a South Band Pawnee form for Cognate Set 173, the two possibilities for 'moose' are **peecusarut* or *paacusarut*. South Band Pawnee shares the innovation of *a* and *i* contracting to make *e*; therefore, there was a strong probability that the South Band form could approximate the Arikara form more closely than the Skiri form does. However, an entry was found in a secondary source, John Brown Dunbar's Pawnee

Vocabulary, which validated that the South Band Pawnee form for Cognate Set 173 'elk calf' should be *paahariˀ*. The entry in Dunbar's Pawnee Vocabulary that allowed for this was *pă-hŭr-ĭ* 'a fawn of the elk'. Based upon this we can assume that South Band Pawnee phonology more closely approximates Skiri Pawnee phonology in this instance. Because the South Band Pawnee form is *paahariˀ* 'elk calf', evidenced by *pă-hŭr-ĭ* 'a fawn of the elk', it can be assumed based upon this evidence that when *pah* 'elk' and i*cus* 'nose' combine, it will produce the form ***paacus*. When the final morpheme *arut* 'soft' combines, it results in the newly constructed South Band Pawnee word ***paacusarut*** 'moose', literally 'soft nosed elk'.

Demonstrating Steps Four, Five, and Six of the Repurposed Comparative Method

In order to construct a word for 'camel' in Pawnee, it is necessary to utilize the comparative method in the steps that have been outlined. The first three steps of this repurposed comparative method have been demonstrated in Chapter 3. First, an Arikara and Pawnee cognate list was compiled. Then, Arikara and Pawnee sound correspondences were established. Next, it was determined which sound correspondence sets were partially overlapping or in complementary distribution with one another. In this instance, this word was much simpler to construct because the fusional nature of Arikara and Pawnee did not obscure morpheme boundaries. Therefore, it was much easier to isolate the Arikara morphemes, which are cognate with Pawnee. The following table represents the Arikara and Pawnee cognates that were necessary for the construction of a Pawnee word for 'camel':

Table 33: Cognates Utilized to Propose a Pawnee Word for 'camel'

Cognate	Arikara	South Band	Skiri	Gloss

Set #		Pawnee	Pawnee	
231	xaatatwáruˀ	----------	----------	‘camel’
239	xaawaarúxtiˀ	aruusaˀ, asaa- N DEP	aruusaˀ, asaa- N DEP	‘horse’
268	waaruxtii	waarukstii	waarukstii	‘be holy’, ‘be sacred’
277	haahtatwaruˀ ‘humpbacked trunk (old-fashioned type)’	pahruuc	paahuuhc, taatparuuc	‘be humpbacked’, ‘be hunchbacked’
236	taátuˀ	taatuˀ, tatkiicuˀ	taatuˀ, tatkiicuˀ	‘stalk of a plant (generic)’, ‘animal’s back’

Morphemic and Phonological Analysis

The Arikara word for camel is unattested in both Pawnee dialects; therefore, I have utilized the comparative method to base the Pawnee word on the attested Arikara word. The word for camel was much easier to construct than moose because many of the sound correspondences were more of a direct one to one sound correspondence. Therefore, based upon the established sound correspondences, one would assume that the Pawnee forms for both dialects for camel is **saatatwaru*; however, this assumption is incorrect. Again, it is necessary to be aware of each language or dialects’ phonology. Based upon observations in Cognate Set 12, 239, 268, 273, and 282, Arikara deleted the initial *a* of *xaawaarúxtiˀ* ‘horse’. This is evidenced by the fact that *asaa-* is the dependent noun for ‘horse’ or ‘dog’ in both Pawnee dialects; therefore, *xaa-* is most likely the dependent noun for ‘horse’ or ‘dog’ in Arikara. Other evidence illustrating this can be found in Cognate Sets 12, 273, and 282. In this case, Arikara *xaawaarúxtiˀ* ‘horse’ appears to literally mean ‘sacred/mysterious dog’. Cognate Set 277 posed an issue when I was first compiling this cognate list because the Arikara morpheme ‘be humpbacked’ was not found in the AISRI Online Dictionary Portal. However, after

doing some more searching in the AISRI Online Dictionary Portal I came across the form *haahtatwaruˀ* 'humpbacked trunk (old-fashioned type)', which is not entirely cognate with the Pawnee forms but is important nevertheless. Arikara *haahtatwaruˀ* is important because it contains *tatwaruˀ*, which accounts for the final morpheme in the Arikara word in Cognate Set 231. This morpheme also very nearly approximates the Skiri Pawnee morpheme *taatparuuc* 'be humpbacked' in Cognate Set 277. Additionally, Cognate Set 236 is evidence that Arikara *tatwaruˀ* and Pawnee *taatparuuc* is comprised of *taat*/*tat* 'animal's back' and Arikara *waruˀ* 'hump' or Pawnee *paruuc* 'hump'. Finally, Cognate Set 236 also shows that the final glottal stop of the Arikara morpheme *waruˀ* does not correspond to a final glottal stop of Pawnee *paruuc*.

Arikara

xaatatwáruˀ

xaa-tat-waruˀ

horse-back-hump

'camel'

Proposed Pawnee Word for Camel

Based upon a phonological and morphological analysis, I feel confident that Arikara *xaatatwáruˀ* 'camel' is comprised of three morphemes, which are cognate to the Pawnee morphemes. Therefore, a Pawnee word for 'camel' can be accurately constructed based upon the attested form and the phonological and morphological analysis of the Arikara word. The first Arikara morpheme is *xaa* 'horse' or 'dog'. The next Arikara morpheme is *tat* 'animal's back' and the final Arikara morpheme is *waruˀ*

'hump'. Together these morphemes combine to make the Arikara word *xaatatwáruˀ* 'camel'. The literal meaning is a 'hump backed horse'. Therefore, based on this analysis a South Band Pawnee and Skiri Pawnee word for 'camel' can be constructed because these are cognates or morphemes that are shared between Arikara and Pawnee. The Arikara morpheme *xaa* 'horse' or 'dog' corresponds to the Pawnee morpheme *asaa* 'horse' or 'dog', while the Arikara morpheme *tat* 'animal's back' corresponds to the Pawnee morpheme *tat* 'animal's back'. Finally, the Arikara morpheme *waruˀ* 'hump' corresponds to the Pawnee morpheme *paruc* 'soft'.

Arikara	SB Pawnee	SK Pawnee
xaatatwáruˀ	**asaatatparuc**	**asaatatparuc**
xaa-tat-waruˀ	asaa-tat-paruc	asaa-tat-paruc
horse-back-hump	horse-back-hump	horse-back-hump
hump backed horse	hump backed horse	hump backed horse
'camel'	'camel'	'camel'

While these morphemes are shared between Arikara and Pawnee, the proposed Pawnee word for 'camel' must adhere to each Pawnee dialect's particular phonology. Based upon observations from Cognate Sets 239, 277, and 236, both Pawnee dialects will share the same form for 'camel', but will not approximate the Arikara form based upon the phonological evidence attained from Cognate Set 239, 277, and 236. Unlike the Arikara form for 'horse', Pawnee does not delete word initial *a* in the dependent noun *asaa*- 'horse' or 'dog'. Additionally, Cognate Set 277 is evidence that Arikara *w* in *tat**w**aruˀ* corresponds to Pawnee *p* in *taat**p**aruuc*. Moreover, Cognate Set 277 also shows that the Arikara final glottal stop in *tatwaruˀ* does not correspond to a Pawnee

final glottal stop in *taatparuuc*. Finally, Cognate Set 236 is evidence that the long vowel *aa* in *taat* shortens to *tat* in compound words. Finally, many syllable final long vowels in descriptive verbs seem to become short vowels when they are found in compound nouns. This results in the construction of the South Band Pawnee and Skiri Pawnee word for 'camel' as ***asaatatparuc***.

Demonstrating Steps Four, Five, and Six of the Repurposed Comparative Method

In order to construct a word for 'cucumber' in Pawnee, it is necessary to utilize the comparative method in the steps that have been outlined. The first three steps of this repurposed comparative method have been demonstrated in Chapter 3. First, an Arikara and Pawnee cognate list was compiled. Then, Arikara and Pawnee sound correspondences were established. Next, it was determined which sound correspondence sets were partially overlapping or in complementary distribution with one another. In this instance, this word was very simple to construct because the fusional nature of Arikara and Pawnee did not obscure morpheme boundaries. Therefore, it was very easy to isolate the Arikara morphemes, which are cognate with Pawnee. The following table represents the Arikara and Pawnee cognates that were necessary for the construction of a Pawnee word for 'cucumber':

Table 34: Cognates Utilized to Propose a Pawnee Word for 'cucumber'

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
232	wahUxtareeˀúx	----------	----------	'cucumber'
174	WAhúx	pahuks	pahuks	'squash', 'pumpkin'
76	tareeˀuux	tareeˀuus	tariiˀuus	'be blue'

Morphemic and Phonological Analysis

The Arikara word for cucumber is unattested in both Pawnee dialects; therefore, I have utilized the comparative method to base the Pawnee word on the attested Arikara word. The word for cucumber was very easy to construct, unlike the previous constructed words, because many of the sound correspondences were a direct one to one sound correspondence. Therefore, based upon the established sound correspondences, one would correctly assume that the Pawnee forms for both dialects for cucumber is *pahukstareeʾus* and *pahukstariiʾus*. Still, as has been illustrated previously, it is necessary to be aware of each language or dialects' phonology.

Arikara

wahUxtareeʾúx

pahux-tareeʾux

squash/pumpkin-blue

'cucumber'

Proposed Pawnee Word for Cucumber

Based upon the established sound correspondences and a morphological analysis, I am certain that Arikara *wahUxtareeʾúx* 'cucumber' is comprised of two morphemes, which are cognate to the Pawnee morphemes. Therefore, a Pawnee word for 'cucumber' can be accurately constructed based upon the attested form, the sound correspondences, and a morphological analysis of the Arikara word. The first Arikara morpheme is *WAhúx* 'squash' as in Cognate Set 174, while the other Arikara morpheme is *tareeʾux* 'blue' as in Cognate Set 76. Together these morphemes combine to make the

Arikara word *wahUxtareeˀúx* ‘cucumber’. The literal meaning is a ‘blue/green squash’. Therefore, based on this analysis a South Band Pawnee and Skiri Pawnee word for ‘cucumber’ can be constructed because these are cognates or morphemes that are shared between Arikara and Pawnee. The Arikara morpheme *WAhúx* ‘squash’ corresponds to the Pawnee morpheme *pahuks* ‘squash’, while the Arikara morpheme *tareeˀux* ‘blue’ corresponds to the South Band Pawnee morpheme *tareeˀus* ‘blue’ and the Skiri Pawnee morpheme *tariiˀus* ‘blue’.

Arikara	SB Pawnee	SK Pawnee
wahUxtareeˀúx	**pahukstareeˀus**	**pahukstariiˀus**
wahux-tareeˀux	pahuks-tareeˀus	pahuks-tariiˀus
squash-blue	squash-blue	squash-blue
‘cucumber’	‘cucumber’	‘cucumber’

These morphemes are shared between Arikara and Pawnee and the sound correspondences in Chapter 3 are sufficient to propose a South Band Pawnee and Skiri Pawnee word for cucumber. Besides the obvious direct sound correspondences between Arikara and Pawnee, Sound Correspondence 8b accounts for Arikara word initial *w* corresponding to Pawnee word initial *p* in Cognate Set 174. Additionally, Sound Correspondence 16a, not Sound Correspondence 6a, accounts for Arikara *x* corresponding to the Pawnee consonant cluster *ks* in Cognate Set 174. Moreover, Sound Correspondence 12 accounts for Arikara *e* and South Band Pawnee *e* corresponding to Skiri Pawnee *i* in Cognate Set 174. Finally, Sound Correspondence 6a accounts for Arikara final *x* corresponding to Pawnee final *s* in Cognate Set 174. Therefore, the obvious direct sound correspondences between Arikara and Pawnee and the sound

correspondences highlighted here result in the construction of South Band Pawnee ***pahukstareeʾus*** ‘cucumber’ and Skiri Pawnee ***pahukstariiʾus*** ‘cucumber’.

Demonstrating Steps Four, Five, and Six of the Repurposed Comparative Method

In order to construct a word for ‘raisin bread’ in Pawnee, it is necessary to utilize the comparative method in the steps that have been outlined. The first three steps of this repurposed comparative method have been demonstrated in Chapter 3. First, an Arikara and Pawnee cognate list was compiled. Then, Arikara and Pawnee sound correspondences were established. Next, it was determined which sound correspondence sets were partially overlapping or in complementary distribution with one another. In this instance, this word was very simple to construct because the fusional nature of Arikara and Pawnee did not obscure morpheme boundaries. Therefore, it was very easy to isolate the Arikara morphemes, which are cognate with Pawnee. The following table represents the Arikara and Pawnee cognates that were necessary for the construction of a Pawnee word for ‘raisin bread’:

Table 35: Cognates Utilized to Propose a Pawnee Word for ‘raisin bread’

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
235	isataatšús	----------	----------	‘raisin bread’
280	isataáʾuʾ	icataaʾuʾ	icataaʾuʾ	‘bread’
193	tšús	kisuc	kisuc	‘grape’
194	tšusčiisuʾ	kisuckiicuʾ	kisuckiicuʾ	‘grape juice’

Morphemic and Phonological Analysis

The Arikara word for raisin bread is unattested in both Pawnee dialects; therefore, I have utilized the comparative method to base the Pawnee word on the attested Arikara word. Before establishing Sound Correspondence 19, the word for

raisin bread would have been difficult to construct because ‘grape’ in Arikara and Pawnee did not appear to be cognate. However, after establishing this sound correspondence, it became readily apparent that ‘grape’ was cognate in Arikara and Pawnee. Based upon the established sound correspondences in Chapter 3, one would correctly assume that the Pawnee form for raisin bread is *icataakisuc*. Still, as has been illustrated previously, it is necessary to be aware of each language or dialects’ phonology.

Arikara

isataatšús

isataa-tšus

bread-grape

‘raisin bread’

Proposed Pawnee Word for Raisin Bread

Based upon the established sound correspondences and a morphological analysis, I am certain that Arikara *isataatšús* ‘raisin bread’ is comprised of two morphemes, which are cognate to the Pawnee morphemes. Therefore, a Pawnee word for ‘raisin bread’ can be accurately constructed based upon the attested form, the sound correspondences, and a morphological analysis of the Arikara word. The first Arikara morpheme is *isataa* ‘bread’ as in Cognate Set 280, while the other Arikara morpheme is *tšus* ‘grape’ as in Cognate Set 193. Together these morphemes combine to make the Arikara word *isataatšús* ‘raisin bread’. The literal meaning is ‘grape bread’. Therefore, based on this analysis a South Band Pawnee and Skiri Pawnee word for ‘raisin bread’

can be constructed because these are cognates or morphemes that are shared between Arikara and Pawnee. The Arikara morpheme *isataa* 'bread' corresponds to the Pawnee morpheme *icataa* 'bread', while the Arikara morpheme *tšus* 'grape' corresponds to the Pawnee morpheme *kisuc* 'grape'.

Arikara	SB Pawnee	SK Pawnee
isataatšús	**icataakisuc**	**icataakisuc**
isataa-tšus	icataa-kisuc	icataa-kisuc
bread-grape	bread-grape	bread-grape
'raisin bread'	'raisin bread'	'raisin bread'

These morphemes are shared between Arikara and Pawnee and the sound correspondences in Chapter 3 are sufficient to propose a South Band Pawnee and Skiri Pawnee word for raisin bread. Besides the obvious direct sound correspondences between Arikara and Pawnee, Sound Correspondence 5 accounts for Arikara *s* corresponding to Pawnee *c* in Cognate Sets 280 and 193, while Sound Correspondence 19 accounts for Arikara *tš* corresponding to Pawnee *kis* in Cognate Set 193. Therefore, the obvious direct sound correspondences between Arikara and Pawnee and the sound correspondences highlighted here result in the construction of Pawnee ***icataakisuc*** 'raisin bread'.

Demonstrating Steps Four, Five, and Six of the Repurposed Comparative Method

In order to construct a verbal word for 'he represents me' or 'he stands up for me' in Pawnee, it is necessary to utilize the comparative method in the steps that have been outlined. The first three steps of this repurposed comparative method have been

demonstrated in Chapter 3. First, an Arikara and Pawnee cognate list was compiled. Then, Arikara and Pawnee sound correspondences were established. Next, it was determined which sound correspondence sets were partially overlapping or in complementary distribution with one another. In this instance, this word was very simple to construct because the fusional nature of Arikara and Pawnee did not obscure morpheme boundaries. Yet, in many words, particularly verbal words, the fusional nature of Arikara and Pawnee can make it difficult to isolate the Arikara morphemes, which are cognate with Pawnee; however, the sound changes where the morphemes come together in word formation typically give away the underlying morphemes in these languages. Therefore, these phonological clues are very helpful to a morphological analysis of Arikara and Pawnee words. The following table represents the Arikara and Pawnee cognates that were necessary for the construction of a Pawnee word for 'he represents me' or 'he stands up for me':

Table 36: Cognates Utilized to Propose a Pawnee Word for 'he represents me'

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
353	tikuutáRIt	----------	----------	'he stand up for me', 'he represents me (as an attorney does a client)
317	----------	----------	tatuutiirit	'I see her/him/it', 'I looked at her/him/it'
334	tikisčípi	tikuckipi	tikuckipi	'I'm sleepy'
337	tikuhAstaahíš	tikuhactaahis	tikuhactahiis, tikuhactahis	'I'm thirsty'
340	tikuNAsáʾUx	tikuhracaʾus	tikuuhacaʾus	'I'm hungry'
351	taatáRIt	taatarit	taatarit	'I'm standing'
352	teéRIt	teerit	tiirit	'(s)he's standing'

Morphemic and Phonological Analysis

The Arikara verbal word for 'he stands up for me' or 'he represents me' is unattested in both Pawnee dialects; therefore, I have utilized the comparative method to base the Pawnee word on the attested Arikara word. By utilizing the established sound correspondences from Chapter 3, one could correctly construct the Pawnee form *tikuutarit* 'he stands up for me', 'he represents me'; however, in many instances, it is necessary to be aware of each language's or dialects' phonology, particularly for verbal words. In addition, verbal words have much more morphology than nouns; therefore, a phonological analysis of verbal words can help to reveal the underlying grammatical morphemes of Arikara and Pawnee verbal words because of the fusional nature of Arikara and Pawnee. In Cognate Set 353, Arikara *tikuutáRIt* 'he stands up for me' can also be compared to Cognate Sets 317, 334, 337, 340, 351, and 352 and broken down into the following morphemes: *ti-* 'indicative mode with the third person agent', *ø-*, 'third person agent', *ku-* 'first person patient', *ut-* 'benefactive/dative', and *arik* 'stand'. Together these morphemes combine to make the Arikara word *tikuutáRIt* 'he stands up for me' or 'he represents me'. The literal meaning is 'he stands for me'. Cognate Set 317 and other cognate sets show that *ta-* is the 'indicative mode used with 1st and 2nd person agents', while *ut-* is the 'benefactive/dative' morpheme. Cognate Sets 334, 337, and 340 shows that *ti-* is the 'indicative mode used with 3rd person agents', while *ku-* is the '1st person patient' morpheme, although Arikara phonology slightly changes this morpheme and these examples are intransitive verbs with a patientive subject. Cognate Sets 334, 337, and 340 denote that sleep, thirst, and hunger are happening to the subject and therefore account for *ku-* in the 1st person patientive role. On the other hand,

Cognate Set 351 shows that *t-* is the '1st person agent' morpheme, while Cognate Set 352 shows that there is no overt marking for the '3rd person agent'. Based upon this analysis, it is not a far stretch to suggest that *ku-* is also the '1st person patient' for objects. Finally, phonology accounts for the change of word final *-k* to *-t* in the verb root *arik*.

Arikara

tikuutáRIt

ti-Ø-ku-ut-arik

IND.3.A-3.A-1.P-BEN-arik

'he stands up for me' or 'he represents me'

Proposed Pawnee Word for He Represents Me

Based upon the established sound correspondences and a morphological analysis, I am certain that Arikara *tikuutáRIt* 'he stands up for me' or 'he represents me' is comprised of five morphemes, which are cognate to the Pawnee morphemes. Therefore, a Pawnee word for 'he stands up for me' can be accurately constructed based upon the attested form, the sound correspondences, and a morphological analysis of the Arikara word. The first Arikara morpheme is *ti-* 'indicative mode with the third person agent'. The next morpheme is a null morpheme, ø-, 'third person agent'. The third morpheme is *ku-* 'first person patient'. The fourth morpheme is *ut-* 'benefactive', while the final Arikara morpheme is *arik* 'stand'. Together these morphemes combine to make the Arikara word *tikuutáRIt* 'he stands up for me' or 'he represents me'. The literal meaning is 'he stands for me'. Therefore, based on this analysis a South Band

Pawnee and Skiri Pawnee word for ‘he stands up for me’ can be constructed because these are cognates or morphemes that are shared between Arikara and Pawnee.

Arikara	SB Pawnee	SK Pawnee
tikuutáRIt	**tikuutarit**	**tikuutarit**
ti-Ø-ku-ut-arik	ti-Ø-ku-ut-arik	ti-ku-ut-arik
IND.3.A-3.A-1.P-BEN-arik	IND.3.A-3.A-1.P-BEN-arik	IND.3.A-3.A-1.P-BEN-arik
‘he stands up for me’, ‘he represents me’	‘he stands up for me’, ‘he represents me’	‘he stands up for me’, ‘he represents me’

These morphemes are shared between Arikara and Pawnee and the sound correspondences in Chapter 3 are sufficient to propose a South Band Pawnee and Skiri Pawnee word for ‘he stands up for me’. Based upon the established sound correspondences, the Pawnee word will be an exact replica of the Arikara word. The only difference being that the Pawnee word will not have devoicing like the Arikara word. Based upon this information, Pawnee ***tikuutarit*** ‘he represents me’ or ‘he stands up for me’ is constructed.

Chapter 5: Conclusions, Issues, and Future Research

In this thesis, I have argued for the repurposing of the comparative method for Pawnee language and dialect revitalization and demonstrated this repurposed comparative method by utilizing the Arikara documentation, the South Band Pawnee documentation, and the Skiri Pawnee documentation to propose words that were previously not found in the Pawnee documentation. I did not attempt to propose Arikara words based on this repurposed comparative method because it is not my place to do this, as I am not an Arikara tribal community member. However, the sound correspondences established and demonstrated in this thesis will allow for Arikara tribal community members to utilize this repurposed comparative method as well.

While this repurposed comparative method is a useful tool for language revitalization, it is not the saving grace of Pawnee or Arikara language revitalization efforts by any means. It is merely another useful tool that practitioners of Pawnee and Arikara language revitalization efforts can utilize. As has been demonstrated in this thesis, the repurposed comparative method works; however, there are also many issues that were encountered in this study. Many of the issues that were encountered in this study are described in the following issues section.

Some Issues

The comparative method is a useful tool for establishing sound correspondences based upon cognates and it was essential to this thesis; however, words that were not cognate between Arikara and Pawnee were simply ignored. Sometimes this can be an issue. For example, if one looks at the Cognate Sets, sometimes there are not

documented forms in either Pawnee dialect, but Arikara has a documented form that is clearly an English borrowing. Do we, the Pawnee people, borrow a word that is clearly borrowed? Some of the other issues encountered are areal features that are present in Arikara, but are not present in either Pawnee dialect. Again, do we, the Pawnee people, borrow features that are not found in the Pawnee language, but are found in Arikara?

Borrowings

The Northern Caddoan languages are noted for relatively few borrowings from neighboring Indian languages and European languages; however, borrowing words is a common way that people fill gaps in their lexicon. Therefore, Arikara and Pawnee are not exceptions to this. Most borrowings in the Northern Caddoan languages are limited to personal names, tribal ethnonyms, and miscellaneous nouns (Parks 2001:90). In this thesis, borrowed words in Arikara have not been borrowed into Pawnee by constructing these forms. This is because borrowings are not cognate and do not typically adhere to the sound correspondences that have been demonstrated in this thesis. Table 37 illustrates a few of the words that have been determined to be borrowed words.

Table 37: Borrowed Words in Arikara, South Band, and Skiri

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
197	kúhkUx	kúhku	kúhku	'pig'
199	isataaniwíruˀ	piískita	piískita	'biscuit'
200	ápos	ápuˀ	ápuˀ	'apple'
201	----------	ákse	aáksi	'ox'

Analysis

Some of these words correspond in Arikara and Pawnee, while most do not. The word for 'pig' in Arikara, South Band Pawnee, and Skiri Pawnee appears to be a

cognate; however, the Arikara and Pawnee word for ‘pig’ is apparently a French borrowing (Parks). The Arikara and Pawnee word for ‘apple’ also appears as if they could be cognates; however, this word is an English borrowing (Parks 2001:90). The Arikara appear to have borrowed ‘apples’, in the plural, from English into Arikara, while both dialects of Pawnee appear to have borrowed ‘apple’, in the singular, from English into Pawnee.

The Arikara word for ‘biscuit’ is composed of the morphemes *isataa* ‘bread’ and *niwiru* ‘round’; therefore, this word is not a borrowed word in Arikara. On the other hand, the Pawnee word *piískita* corresponds almost directly to English ‘biscuit’. The unaspirated, voiceless bilabial stop /p/ in Pawnee ***p****iiskita* corresponds to the voiced bilabial stop /b/ in English ‘**b**iscuit’. The first vowel /ii/ in Pawnee *p**ii**skita* corresponds to the first vowel /i/ of English ‘b**i**scuit’. Additionally, the voiceless alveolar fricative /s/ in Pawnee *pii**s**kita* corresponds to the voiceless alveolar fricative /s/ in English ‘bi**s**cuit’ Furthermore, the voiceless velar stop /k/ in Pawnee *piis**k**ita* corresponds to the /k/ sound in English ‘biscuit’. Moreover, the second vowel /i/ in Pawnee *piisk**i**ta* corresponds to the second vowel /i/ in English ‘bisc**ui**t’. The voiceless alveolar stop /t/ in Pawnee *piiski**t**a* also corresponds to the /t/ sound in English ‘biscui**t**’. Finally, Pawnee *piiskit**a*** has another syllable that is not present in the English pronunciation of ‘biscuit’.

The South Band Pawnee word *ákse* and the Skiri Pawnee word *aáksi* corresponds very nearly to the English word ‘oxen’. The first vowel /a/ or /aa/ in the Pawnee words ***a****kse*/***aa****ksi* correspond to the first vowel sound /a/ of English ‘oxen’. Next, the Pawnee consonant cluster *ks* in *a**ks**e*/*aa**ks**i* corresponds to the *ks* sound orthographically represented in English spelling by the letter *x*. Furthermore, the South

Band Pawnee vowel /e/ and the Skiri Pawnee vowel /i/ correspond to the English /ɛ/ sound in 'ox**e**n'. Finally, Pawnee does not have an /n/ sound to correspond to the word final /n/ in English 'oxe**n**'.

Other Arikara Borrowings

Again, while there are not many borrowings in the Northern Caddoan languages, borrowing words is still a common way that people fill gaps in their lexicon. These borrowings are slightly different than the ones previously described and illustrated. Again, borrowed words in Arikara have not been borrowed into Pawnee by constructing these forms, since borrowings are not cognate and do not adhere to the sound correspondences that have been demonstrated in this thesis. Table 38 illustrates another type of borrowing that is not exhibited in Pawnee.

Table 38: Other Arikara Borrowings

Cognate Set #	Arikara	South Band Pawnee	Skiri Pawnee	Gloss
207	čooč- N DEP, čoociišat 'go to church'	----------	----------	N DEP church
208	iskun- N DEP, iskuhnuupo, iskunuukat, iskuunat, skuunat	----------	----------	N DEP school
209	peetš- N DEP, ut…peetšuu 'be (a number of) pages, peetšwiinahak 'turn a page'	----------	----------	N DEP page

Analysis

In each of these examples, it is clear that these are English borrowings. However, unlike the borrowings discussed previously, these particular borrowings are

not utilized as independent words in Arikara. Clearly, *čooč*-, *iskun*-, and *peetš*- correspond to the English words 'church', school, and page. However, *čooč*-, *iskun*-, and *peetš*- only occur as dependent forms that are incorporated into Arikara verbs. While Pawnee also utilizes noun incorporation, Pawnee does not exhibit incorporating borrowed nouns into the Pawnee verb complex.

Two-way Distinction for Arikara Consonantal Sound Symbolism

According to Marianne Mithun's the Native Languages of North America, "Lakhota, a Siouan language of the Plains, shows patterns of consonant alternations in vocabulary that correspond to degrees of intensity. Here, the point of articulation of fricatives moves back from alveolar (s, z) to alveo-palatal (š, ž) and to velar (x, ɣ) to indicate increasing intensity" (Mithun 1999:32). In Arikara, a similar pattern of consonant alterations in vocabulary that corresponds to degrees of intensity is also exhibited. Like Lakhota, the point of articulation of fricatives also moves back. In the Arikara data, it is typical that there are usually only two-way distinctions between the fricatives; however, the feature of consonantal sound symbolism is only found in Arikara, not Pawnee. The examples that illustrate this two-way distinction follow:

Table 39: Two-way Distinction for Arikara Consonantal Sound Symbolism

Cognate Set #214	kunAhús	kunAhúx
	'little old man'	'old man'
Cognate Set #158	sústIt	súxtIt
	'little old woman'	'old woman'
Cognate Set #168	wiinásts	wiináxtš
	'little boy'	'boy'

Cognate Set #282	seehaníhts	xeehaníhtš
	‘newborn colt’	‘colt’
Cognate Set #187	kuúnus	kuúNUx
	‘little bear’	‘bear’

Analysis

In these Cognate Sets, it is clear that a pattern exists between diminutive size and the alveolar fricative *s*. As the point of articulation moves from alveolar to the velar fricative *x*, the size being indicated is no longer diminutive. This feature in Arikara was an issue at first because it made it difficult to establish a regular sound correspondence between Arikara *x* and Pawnee *s*. However, after determining that consonantal sound symbolism is most likely an areal feature in Arikara, Sound Correspondence 6a was determined to be a regular sound correspondence between Arikara and Pawnee. Finally, it is interesting to note that consonantal sound symbolism is utilized in Arikara to indicate diminutiveness, while Pawnee utilizes the diminutive suffix *-ki(s)*, which is not productive and seems to only be a formal suffix in many instances (Parks 1976:102).

Three-way Distinction for Arikara Consonantal Sound Symbolism

While it is more typical that there is usually only a two-way distinction between the alveolar fricative (s) and the alveo-palatal fricative (š), in a few instances there are sometimes three-way distinctions between the alveolar fricatives. Again, this feature is only exhibited in Arikara, not Pawnee. The examples that illustrate this three-way distinction follow:

Table 40: Three-way Distinction for Arikara Consonantal Sound Symbolism

Cognate Set #157	suúnats	suúnatš	suúnaxtš
	‘tiny girl’	‘young girl’	’12-15 girl’
Cognate Set #12	saáts	xaáts	xaátš
	‘newborn puppy’	‘little dog’	‘dog’

Analysis

In Cognate Sets 157 and 12, it is clear that a three-way pattern exists between size and the alveolar fricatives. It is clear that diminutiveness is associated with the alveolar *s*. Additionally, a slightly larger size than the most diminutive is associated with post-alveolar *š*. Finally, normal size or a larger size than post-alveolar *š* is associated with the velar fricative *x*. Similar to the two-way distinction for Arikara consonantal sound symbolism, this feature compounded the issue at first because it made it difficult to establish a regular sound correspondence between Arikara *x* and Pawnee *s* and Arikara *š* and Pawnee *s*. However, after determining that consonantal sound symbolism is an areal feature in Arikara, Sound Correspondence 6a and 6b were determined to be a regular sound correspondence between Arikara and Pawnee. Again, it is interesting that consonantal sound symbolism is utilized in Arikara to indicate diminutiveness, while Pawnee utilizes the archaic diminutive suffix *-ki(s)*, which is not productive and seems to simply be a formal suffix in many instances (Parks 1976:102).

Semantic Change/Drift (Narrowing and Widening)

Semantic change or semantic drift is always an issue that is encountered when doing comparative work. Some examples of semantic change or semantic drift were

encountered when searching for cognates in Arikara and Pawnee. Some of these examples of semantic change include: star/Pleiades, edible plant root/Jerusalem artichoke/carrot, lip/nose, goose/crane/duck. This is an issue because when the meanings of words shift, it can be difficult to ascertain whether a meaning narrowed or widened. Additionally, there are issues that are encountered in the social realm when picking and choosing which language is more conservative or more innovative.

Suggestions

There are many issues that are encountered when utilizing the comparative method for language revitalization. Borrowed words are always to be encountered when utilizing the comparative method. In this thesis, borrowed words are ignored because they typically do not adhere to established sound correspondences. On the other hand, borrowing words is a common way to fill gaps in the lexicon; therefore, there is not a reason that Pawnee cannot borrow words that are clearly borrowings in Arikara. Moreover, areal features present in Arikara but absent in Pawnee, such as consonantal sound symbolism, are dealt with, but these features are not constructed in Pawnee. However, borrowing features is also a common way that languages change; therefore, it is not unreasonable that Pawnee can borrow this feature from Arikara. Ultimately, the Pawnee and Arikara people decide upon the legitimacy of their words. It is possible that a constructed word utilizing this repurposed comparative method can technically be an "incorrect" form based upon linguistic analysis, but language in use by the Pawnee and Arikara language revitalization speech communities will take precedence.

Future Research

Future research that I am interested in pursuing is a more comprehensive comparison of Pawnee and Arikara grammar. Specifically, Pawnee and Arikara syntax and areas of the verb morphology remain under-studied. Previous findings in Parks (1976) and this study, particularly in regard to Pawnee and Arikara verb morphology, suggest that Pawnee and Arikara are more or less identical.

Furthermore, I am also interested in pursuing a fuller historical analysis of preverbs in Pawnee to determine what they developed from. According to Parks (2008), the preverbs *ir-*/*a-*, *ut*, and *uur-* have no tangible meaning when functioning as a component of a discontinuous stem. However, they are identical in form to "grammatical prefixes that have other functions" (2008:31-32) such as the obviative/de-focusing/switch-reference prefix (*ir-*), the benefactive/dative, or indirect, object prefix (*ut-*), and the patient possession prefix (*uur-*). In the course of my own research for this thesis, I have noticed that there appears to be a deictic component to some of these forms when functioning as preverbs, particularly the preverb *ir-*. Future research will include a comparative historical reconstruction of these forms with a goal of understanding their diachronic origin and synchronic function.

Another related research opportunity is a historically motivated grammar of Proto-Pawnee, or the language that theoretically existed before the split of Pawnee and Arikara. Finally, I am interested in discovering if this repurposed comparative method can be utilized for other endangered Caddoan languages, such as Kitsai, Wichita, and Caddo.

Other future research that is more anthropologically oriented is a follow up study with the Pawnee and Arikara communities to get a better understanding of the language ideologies that exist in the Pawnee and Arikara communities. This will also allow me to follow up and see how this thesis is being utilized, or not. The study of language ideologies in the Pawnee and Arikara communities will allow me study various issues that occur in language revitalization. Some research questions include: What are the language ideologies affecting the Arikara and Pawnee communities in their language revitalization efforts? How do the Arikara and Pawnee communities feel about using a related language to help in their language revitalization efforts? Why do they feel the way that they do? What constitutes a speech community in the Pawnee and Arikara communities? Do Pawnee and Arikara constitute a speech community? Why? What does language use look like in these communities now? How do the Pawnee and Arikara languages relate to contemporary identity?

These research topics range from an opportunity to gain a better understanding of the historical development of the Pawnee and Arikara languages' grammatical structure to the opportunity to gain a better understanding and appreciation for the dynamic nature of current Pawnee and Arikara language revitalization efforts and the ideologies that affect these tribal communities' efforts. This socio-cultural research can lead to a better understanding of Pawnee and Arikara ideologies and contemporary identity for Pawnee and Arikara people.

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Appendix A: Abbreviations

Abbreviation	Meaning
1.A	first person agent
1.P	first person patient
2.A	second person agent
2.P	second person patient
3.A	third person agent
Ar.	Arikara
BEN	benefactive
Engl.	English
IND.3.A	indicative mode with third person agent
inven.	inventory
IPA	international phonetic alphabet
N	noun
N DEP	dependent noun
obs.	obsolete
orth.	orthography
pl.	plural
SB	South Band Pawnee
sg.	singular
SK	Skiri Pawnee

Appendix B: Arikara and Pawnee Sound Inventory, Orthographic Conventions, and Examples to Illustrate Sounds

Ar. Inven. (IPA)	Ar. Orth.	Ar. Example	Similar to sound in	SK Inven. (IPA)	SK Orth.	SK Example	Similar to sound in	SB Inven. (IPA)	SB Orth.	SB Example	Similar to sound in
p	p	paxuˀ	**sp**ot	p	p	paksuˀ	**sp**ot	p	p	paksuˀ	**sp**ot
t	t	taWIt	**st**op	t	t	tawit	**st**op	t	t	tawit	**st**op
k	k	kaaxuˀ	s**c**off	k	k	kaasuˀ	s**c**off	k	k	kaasuˀ	s**c**off
ʔ	ˀ	kaˀit	uh-oh	ʔ	ˀ	aakaˀa	uh-oh	ʔ	ˀ	aakaˀa	uh-oh
tʃ	č	čitUxˀ	wa**tch**	ts~tʃ	c~č	kicku, caski	co**ts**, wa**tch**	ts~tʃ	c~č	kecku, cuskiˀit	co**ts**, wa**tch**
s	s	sapat	**s**op	s	s	sakuuruˀ	**s**op	s	s	sakuuruˀ	**s**op
ʃ	š	šakuunuˀ	**sh**op	------	------	----------	---------	------	------	----------	---------
x	x	sax, skuuxuˀ	Ba**ch**	------	------	----------	---------	------	------	----------	---------
h	h	hiituˀ	**h**op	h	h	hiituˀ	**h**op	h	h	ahuˀ	**h**op
w	w	wiitA	**w**all	w	w	wis	**w**all	w	w	wis	**w**all
ɾ	r	arikaraanuˀ	butter, pero	ɾ	r	arikaraaruˀ	butter, pero	ɾ	r	arikaraaruˀ	butter, pero
n	n	niišuˀ	**n**od	------	------	----------	---------	----	------	----------	---------
iː	ii	wiíta	machine	iː	ii	piita	machine	iː	ii	piita	machine
i~ɪ	i	pítkUx	police & pit	i~ɪ	i	pitku	police & pit	i~ɪ	i	pitku	police & pit
eː	ee	čeekáˀuˀ	**neigh**bor	iː	ii	kiikaˀuˀ	knee	eː	ee	keekaˀuˀ	**neigh**bor
ɛ	e	teškúNIt	bed	i~ɪ	i	tikskurit	bid	e~ɛ	e	tekskurit	bed
ə~ɑ	a	wáh	**a**go, f**a**ther	ə~ɑ	a	pah	**a**go	ə~ɑ	a	pah	**a**go
ɑː	aa	inaániˀ	**pa**	ɑː	aa	iraariˀ	**pa**	ɑː	aa	iraariˀ	**pa**
o	o	štoh	wr**o**te	u~ʊ	u	istuˀ	b**oo**t, p**u**t	u~ʊ	u	istu	b**oo**t, p**u**t
oː	oo	koohaánuˀ	**go**	uː	uu	kuuhaaruˀ	r**u**de	uː	uu	kuuhaaruˀ	r**u**de
u	u	hiituˀ	b**oo**t	u~ʊ	u	hiituˀ	b**oo**t, p**u**t	u~ʊ	u	iituˀ	b**oo**t, p**u**t
uː	uu	huutuúnuˀ	r**u**de	uː	uu	huutuuruˀ	r**u**de	uː	uu	uutuuruˀ	r**u**de

Appendix C: Arikara and Pawnee Cognates

CS#	Arikara	SB Pawnee	SK Pawnee	Gloss
1	-t-	-t-	-t-	‘1.A’
2	-a-	-a-	-a-	‘2.P’
3	čituúʾU	kítuuʾuʾ	kítuuʾuʾ	‘all’
4	áxkU	ásku	ásku	‘one’
5	pítkUx	pitku	pítku	‘two’
6	rihuun	rihuur	rihur	‘be big’, ‘be large’
7	sápat	capat	cápaat	‘woman’
8	wiíta	piita	piita	‘man’
9	sáhniš	cahriks	cáhiks	‘person’
10	čiwáhtš	kaciiki	kaciiki	‘fish’
11	níkUs	rikucki	rikucki	‘bird’
12	saáts ‘newborn puppy’, xaáts ‘little dog’, xaátš ‘dog’	asaaki	asaáki	‘dog’
13	načiriíkuʾ	rakiriikuʾ	rakiriikuʾ	‘seed’
14	sčeekaraákuʾ	kskeekaraakuʾ	kskiikaraakuʾ	‘leaf’
15	kAsukaawíuʾ, kAsuukaawíuʾ	kapahcuʾ	kapahcuʾ, rakapahcuʾ	‘root (generic)’
16	haakIskuúxuʾ	raakickuusuʾ	raakickuusuʾ	‘bark (of a tree)’
17	sahnišskuúxuʾ	ckariitki, ckariituʾ, ckuusuʾ	ckáriitki, ckuusuʾ	‘skin’
18	tsástš	kisacki	kisaacki	‘meat’
19	paátuʾ	paatuʾ	paatuʾ	‘blood’
20	čiíšuʾ	kiisuʾ	**kiisu**ʾ	‘bone’
21	čiisAhítš	kicahihtuʾ	kiicahihtuʾ	‘grease’
22	nipiíkuʾ	ripiikuʾ	ripiikuʾ	‘egg’
23	ariíkuʾ, paariíkuʾ	paariikuʾ, paariki	paariikuʾ	‘horn’
24	NItkuúʾ	ritkuʾuʾ	ritkuʾuʾ	‘tail’
25	hiítuʾ	iituʾ	hiituʾ	‘feather’
26	uúxuʾ	uusuʾ	uusuʾ	‘hair’
27	páxuʾ	paksuʾ	paksuʾ	‘head’
28	čiriíkuʾ	kiriikuʾ	kiriikuʾ	‘eye’
29	sⁱniítuʾ, (suxčítA long-nosed), súxuʾ ‘lip’	cuusuʾ	cusuʾ	‘nose’
30	haakáʾuʾ	aakaʾuʾ	haakaʾuʾ	‘mouth’
31	aánuʾ	aaruʾ	aaruʾ	‘tooth’
32	haátuʾ	aatuʾ	haatuʾ	‘tongue’
33	šwiítuʾ	ikspiituʾ	**ikspiitu**ʾ	‘fingernail’
34	áxuʾ	asuʾ	asuʾ	‘foot’
35	paáʾuʾ , paačiísuʾ	paakiisuʾ	paakiisuʾ	‘knee’
36	íšuʾ	iksuʾ	**iksu**ʾ	‘hand’
37	čiísuʾ	kiicuʾ	kiicuʾ	‘neck’
38	eétuʾ	eetuʾ	iituʾ	‘breast’, ‘mammary gland’

39	kariíkuˀ	kariikuˀ	kariikuˀ	‘liver’
40	čiikaa	kiikaa	kiikaa	‘drink’
41	waawa-a	waawa-a	waawa-a	‘eat’
42	kaˀus	kaˀuc	kaˀuc	‘bite’
43	ut…eerik	ut…eerik	ut…iirik	‘see’, ‘look at’
44	atkaˀu	atkaˀu	atkaˀu	‘hear’, ‘listen’
45	un…atkaˀu	**ur…atkaˀu**	ur…atkaˀu	‘hear from’, ‘listen to’
46	itka	itka	itka	‘sleep’, ‘be asleep’
47	koot	kuut	kuut	‘die’
48	kootik	kuutik	kuutik	‘kill’, ‘slay’
49	huuseeriitik	huuceeriitik	huuciriitik	‘swim’
50	awanuu	awarii	awarii	‘fly around’
51	awaxk	awask	awask	‘laugh’
52	in…a	ir…a	ir…a	‘come’
53	ša	sa	sa	‘lie’
54	kux	ku(s)	ku(s)	‘sit’
55	arič	arik	arik	‘stand’
56	kakatk	kakatk	kakatk	‘cut’
57	waako	waaku	waku	‘say’
58	šakuúnuˀ	sakuuruˀ	sakuuruˀ	‘sun’
59	páh	pah	pah	‘moon’
60	sákaaˀa	uupirit	huupirit	‘star’
61	tstoóxuˀ	kiicuˀ	kiicuˀ	‘water’
62	tsUhiínuˀ	cuhuuruˀ	cuhuuruˀ	‘rain’
63	kanítš	karitki	karitki	‘rock’, ‘stone’
64	čiwíhtuˀ	kiwiiktuˀ	kiwiktuˀ	‘sand’
65	hunaánuˀ	uraaruˀ	huraaruˀ	‘land’, ‘earth’
66	istaxa	ickakatasa	ickakatasa	‘be cloudy’, ‘be overcast’
67	skaRAhkatAhaánuˀ	ckaˀuˀ	ckaˀuˀ	‘cloud’
68	skáˀuˀ	ckaˀuˀ	ckaˀuˀ	‘face’
69	naawiíšuˀ	raawisuˀ	raawiisuˀ	‘smoke’
70	čeekáˀuˀ	keekaˀuˀ ‘flame’	kiikaˀuˀ ‘flame’	‘fire’
71	itkanahtuúsuˀ	karaktuhcuˀ	karaaktuuhcuˀ	‘ash’
72	in…kunistaˀa	ir…kuricta ˀa	ir…kuricta ˀa	‘be ablaze’, ‘burn’
73	hatuúnuˀ, -sat-	aturaaruˀ	haturaaruˀ, hatuur- N DEP	‘path’, ‘road’
74	waáˀuˀ	paaˀuˀ	paaˀuˀ	‘hill’, ‘mountain’
75	pahaat	pahaat	pahaat	‘be red’
76	tareeˀuux	tareeˀuus	tariiˀuus	‘be blue’
77	rahkataán	rahkataar	rahkataar	‘be yellow’
78	čiisawataán	taakaar	taakaar	‘be white’
79	katiít	katiit	katiit	‘be black’
80	NItkahaánuˀ	ratkahaaruˀ	ratkahaaruˀ	‘night’

81	in…awirista'u, in…awiristo	ir…awicta'u	ir…awicta'u	'be hot (weather)'
82	kaawačiit	kaawakiit	kaawakiit	'be sated', 'be full'
83	un…heer	ur…heer	ur…hiir	'be good'
84	riwiruu	riwiruu	riwiruu	'be round'
85	táWIt	tawit	tawit	'three'
86	huúnu'	iiru'	hiiru'	'grass'
87	neésu'	reecu'	riicu'	'intestine'
88	huutuúnu'	uutuuru'	huutuuru'	'wind'
89	pihuu	pihuu	pihuu	'be foggy'
90	kaasuu	kaacuu	kaacuu	'urinate'
91	ut…tareepi	ut…tareepi	ut…tariipu	'tie', 'tie around', 'tie on'
92	ra'u	ra'uk	ra'uk	'make', 'construct', 'build'
93	raana'u, raano	raara'uk	raara'uk	'sing'
94	naanoókux	**raaruukusu'**	raaruukusu'	'singer'
95	čikak	kikak	kikak	'cry', 'weep'
96	áskAt	ackat	áckat	'up', 'above'
97	niíšu'	riiksu'	riiksu'	'arrow'
98	pitáru'	pitaru'	pitaru'	'ant (generic)'
99	tanáha'	taraha'	taraha'	'buffalo'
100	haáku' 'box'	raaku' 'box'	raaku' 'box'	'wood'
101	apak	apak	apakus 'fighter, one who likes to fight'	'fight'
102	huta	huta	huta	'be windy'
103	atíka'	atika'	atíka'	'my grandmother'
104	áka'	aka'	áka'	'your grandmother'
105	ikaáni'	ikaari'	ikaari'	'her/his grandmother'
106	atípa'	atipat	atípat	'my grandfather'
107	ápa'	apat	ápat	'your grandfather'
108	ipáhni'	ipakti'	ipaakti'	'her/his grandfather'
109	tiWIsíRIš	tiwaciriks	tiwaciriks	'my maternal uncle'
110	aWIsíRIš	paciriks	paciriks	'your maternal uncle'
111	iwaaníRIš	iwaaririks	iwaririks, iwariiriks	'her/his maternal uncle'

112	atⁱnáˀ	atiraˀ	atíraˀ	‘my mother’
113	xáx	asas	ásas	‘your mother’
114	šáxtiˀ	isastiˀ	isaastiˀ	‘her/his mother’
115	atíˀAx	atiˀas	atíˀas	‘my father’
116	haáˀAx	aˀas	áˀas	‘your father’
117	hiˀáxtiˀ	iˀasti	iˀaastiˀ	‘her/his father’
118	áNA	iraariˀ	iraariˀ	‘my sister (female speaking)’
119	áNA	ara	ára	‘your sister (female speaking)’
120	inaániˀ	iraariˀ	iraariˀ	‘her sister (female speaking)’
121	atítat	itahriˀ	itaahiˀ	‘my sister (male speaking)’
122	átat	atat	átaat	‘your sister (male speaking)’
123	itáhniˀ	itahriˀ	itaahiˀ	‘his sister (male speaking)’
124	atⁱnás	iractiˀ	iraactiˀ	‘my brother (female speaking)’
125	ánas	arac	áraac	‘your brother (female speaking)’
126	inástiˀ	iractiˀ	iraactiˀ	‘her brother (female speaking)’
127	áNA	iraariˀ	iraariˀ	‘my brother (male speaking)’
128	áNA	ara	ára	‘your brother (male speaking)’
129	inaániˀ	iraariˀ	iraariˀ	‘his brother (male speaking)’
130	----------	tiwat	tiwaat	‘my niece/nephew’
131	----------	awat	áwaat	‘your niece/nephew’
132	----------	iwahriˀ	iwaahiˀ	‘her/his niece

				nephew’
133	at^{i}nátš	raktiki	raktiiki	‘my grandchild’
134	anátš	arakis	árakis (obs.)	‘your grandchild’
135	iNAhnítš	raktiki	raktiiki	‘her/his grandchild’
136	-ku-	-ku-	-ku-	‘1.P’
137	neskúhtš	reeckuhki	rickuhki	‘fall’, ‘autumn’
138	psíkAt	picikat	picikat	‘winter’
139	xčiskaawítA, AxčiskaawítA	askiickaawita	**askiickaawita**	‘little toe’, ‘pinky toe’
140	nistaakuˀ	rictaakuˀ	rictaakuˀ	‘back’, ‘dorsal region of the body’
141	nikutawikúsuˀ	kutawikucuˀ	kutawikucuˀ	‘hawk’
142	neétAkas, neétahkas, neétAhka	reetahkac	riitahkaac	‘eagle’
143	pitkuxunaánuˀ	pitkusuraaruˀ	pitkusuraaruˀ	‘forty’
144	waawahtíkux	paawaktiku	paawaktikus	‘talker (someone who likes to talk)’
145	WAsuúkaˀ	pacuukaˀ	pacuukaˀ	‘turnip’
146	ničiišuˀ	rikiisuˀ	rikiisuˀ	‘shelled corn’
147	čiitíˀIš	kskiitiˀiks	kskiitiˀiks, kskiitiks	‘four’
148	čiitiˀištaánuˀ	kskiitiˀikstaaruˀ	kskiitikstaaruˀ	‘eighty’
149	čiitiˀištaanu na nooxíniˀ	kskiitiˀikstaaruˀ a rihuksiriˀ	kskiitikstaaruˀ a ruksiriˀ	‘ninety’
150	ščiísuˀ	kskiicuˀ	ikskiicuˀ	‘finger’
151	ščiskaawítA	**kskiicpita**	kskiicpita	‘little finger’, ‘pinky finger’
152	Axčiísuˀ, xčiísuˀ	askiicuˀ	**askiicu**ˀ	‘toe’
153	Axwiítuˀ, xwiítuˀ	aspiituˀ	aspiítuˀ	‘toenail’
154	taRAhaaríč	tarahaariki	tarahaariki	‘buffalo horn spoon’
155	tače	takee	takii	‘Who?’
156	čiis	kiic	kic	‘be a liquid’, ‘be watery’
157	suúnats ‘tiny girl’, suúnatš ‘young girl’, suúnaxtš ‘12-15 girl’	cuuraki	cuuraki	‘girl’
158	súxtIt, sústIt ‘little old woman’	custit	custit	‘old woman’
159	sax	icas, icaski	caas, icaas	‘turtle’
160	neesítš, neesíč	reeciki	riiciki	‘knife’
161	tšaápis	kskiiksaapic	kskiksaapic	‘six’
162	taWIšaápis	tawiksaapic	tawiksaapic	‘eight’

163	NAheešá	**raheesa**	rahiisa	‘tomorrow’
164	----------	askusiriˀ	askúsiriˀ	‘once’, ‘one time’
165	pitkUxíniˀ	pitkusihiriˀ	pítkusihiriˀ	‘twice’, ‘two times’
166	----------	tawihkihiriˀ	tawihkíhiriˀ	‘thrice’, ‘three times’
167	----------	**kskiitiksiri**ˀ	kskiitiksiriˀ	‘four times’
168	wiináxtš, wiinásts ‘little boy’	piiraski	piiraski	‘boy’
169	waawaapis	waawaapic	waawaapic	‘be lightning’
170	waawaapIsúxuˀ	**paawaapicisu**ˀ	paawaapicisuˀ	‘lightning’
171	waáxIt	paasit	paasit	‘bat (mammal)’
172	wáh	pah	pah	‘elk’
173	weehániˀ	**paahari**ˀ	paahariˀ	‘young elk’, ‘elk calf’
174	WAhúx	pahuks	pahuks	‘squash’, ‘pumpkin’
175	wahUxanaáxuˀ	pahuksaraasuˀ	pahuksaraasuˀ	‘watermelon’
176	wáRUx	parus	parus	‘rabbit (generic)’
177	wás	paac	paac	‘wasp’
178	wiínuˀ	piiruˀ	piiruˀ	‘arm’
179	wiísuˀ	piicuˀ	piicuˀ	‘heart’
180	wiitáˀuˀ	piitaˀuˀ	piitaˀuˀ	‘twenty’
181	wireesakUxíniˀ	piireecakusiriˀ	piiriicakusiriˀ	‘on the shoulder’
182	šíhUx	sihuks	suhuks	‘five’
183	šihuxtaánuˀ	sihukstaaruˀ	suhukstaaruˀ	‘one hundred’
184	NIšaátuˀ	risaatuˀ	risaatuˀ	‘rib’
185	šaanaákuˀ	ksaáraakuˀ	ksaraakuˀ	‘wrist’, ‘forearm’
186	teškúNIt	tekskurit	tikskurit	‘nearby’, ‘close by’
187	kuúNUx, kuúnus ‘little bear’	kuuruks	kuruks	‘bear (animal)’
188	taNIhtáˀuˀ	tarikˀtaˀuˀ	tarikˀtaˀuˀ	‘body’
189	paatAhuunuˀ, paatUhuúnuˀ	paatahuuruˀ	paatahuuruˀ	‘blood vessel’, ‘artery’, ‘vein’
190	hAstaahiš	hactaahiis	hactaahiis	‘be thirsty’
191	kaáxuˀ	kaasuˀ	kaasuˀ	‘leg’
192	štó, štoh	istu	istuˀ, sistuˀ (obs.)	‘again’
193	tšús	kisuuc	kisuuc	‘grape’
194	tšusčiísuˀ	kisuckiicuˀ	kisuckiicuˀ	‘grape juice’
195	tIšaátuˀ, tšaátuˀ	kisaatuˀ	katuuractaaka	‘swan’
196	tsakaˀáhnIš, tskaˀaáhniš, tskaˀaáNIš	kickaˀahris, kickaˀaahris	kickaahisuˀ	‘shoulder blade’
197	kúhkUx	kuhku(s)	kuhku(s)	‘pig’

198	skarutkúhkUx	kuhkusickariitki	kuhkusickariitki	‘pig hide’
199	isataaniwíruˀ	piiskita	piiskita	‘biscuit’
200	ápos	riwaharikucuˀ (obs.), apuˀ	ápuˀ	‘apple’
201	----------	akse	aaksi	‘ox’, ‘oxen’, ‘domestic cow’
202	panaáni	paariikuˀ	paariikuˀ	‘banana’
203	patát	ic	ic	‘potato’
204	kawíč, káwitš	kaaripiikuˀ	kaaripiikuˀ	‘cabbage’
205	oótwiˀIs, otwíˀiš, oótwiˀIš	----------	----------	‘oatmeal’
206	aNAxkataánuˀ, wahUxtAkatá, wahUxtAhkatá	aracis	áracis	‘orange (fruit)’
207	čooč- N DEP, čoočiišat ‘go to church’	----------	----------	‘N DEP church’
208	iskun- N DEP, iskuhnuupo, iskunuukat, iskuunat, skuunat	----------	----------	‘N DEP school’
209	peetš- N DEP, ut…peetšuu ‘be (a number of) pages, peetšwiinahak ‘turn a page’	----------	----------	‘N DEP page’
210	tšuu- N DEP, tšuuhookuraahn ‘have chewing tobacco or snuff in one’s mouth’	----------	----------	‘N DEP tobacco (chew)’
211	taakáxtš	taakaski	taakaski	‘dried meat’, ‘jerky’
212	Itkaánuˀ	itkaaruˀ	itkaaruˀ	‘dirt’, ‘dust’
213	koxkAhaánuˀ	kuskahaaruˀ	kuskahaaruˀ	‘friendly visit’, ‘intertribal visit of friendship’
214	kuNAhúx, kuNAhús ‘little old man’	kurahus	kurahus	‘old man’
215	čiinaniítuˀ	kiirariituˀ	kiirariituˀ	‘soup’, ‘broth’
216	čitawi	kitawu	kitawu	‘count’
217	čitaapát	kitaapat	kitaapat	‘otter’
218	čítUx	kituks	kituks	‘beaver’
219	hunaáˀuˀ	uraaˀuˀ	huraaˀuˀ	‘snow’
220	huNAhčípIs	urahkipic	huraahkipic	‘rainbow’
221	hunax	huras	huras	‘find’
222	wiitaníhUx	piitarihuks	piitarihuks	‘bachelor’
223	nikatIhaánuˀ	rikatihaaruˀ	rikatihaaruˀ	‘year’, ‘full

				cycle of the seasons’
224	naaxiítuˀ	raasiituˀ	raasiituˀ	‘ice’
225	axuuk	asuuk	asuuk	‘wear moccasins’, ‘wear shoes’, ‘have on the feet’
226	kaápois	teksis ‘texas’	teksis, tiksis	‘cowboy’, ‘Texan’, ‘Texas cattleman or cowboy’
227	xúhč, xúhtš	asuuruˀ	ásuuruˀ	‘shoe’, ‘moccasin’
228	Axkataˀiwíčes	----------	tiksis asuuruˀ	‘cowboy boots’
229	NAhnunáhtš	rahrurahki	rahurahki	‘deer’
230	weesUxárut	**paacusarut**	**paacusarut**	‘moose’
231	xaatatwáruˀ	**asaatatparuc**	**asaatatparuc**	‘camel’
232	wahUxtareeˀúx	**pahukstareeˀus**	**pahukstariiˀus**	‘cucumber’
233	isataanipiíkuˀ	icataarakiicuˀ	icataarakiicuˀ ‘pastry; cake; sweet roll; cookie; sweet types of bread in general’	‘cake’
234	isataatšús	**icataakisuc**	**icataakisuc**	‘raisin bread’
235	tšuuxIstaátuˀ, tšuúxIt ‘also carrot’, tšuuxItwáhAt ‘carrot’	kisuusit ‘also any edible root, such as carrot, radish, beet’, kisuusitpahat ‘beet’	kisuusit, kisuusitpahat ‘beet’	‘Jerusalem artichoke’, ‘Helianthus tuberosus’
236	taátuˀ	taatuˀ, tatkiicuˀ	taatuˀ, tatkiicuˀ	‘stalk of a plant’, ‘plant (generic)’, ‘animal’s back’
237	neéšuˀ	reéksuˀ	riiksuˀ	‘corn in the ear’, ‘on the cob’
238	neštaátuˀ	rikiistaatuˀ	rikstaatuˀ	‘cornstalk’
239	xaawaarúxtiˀ	aruusaˀ, asaa- N DEP	aruúsaˀ, asaa- N DEP	‘horse’
240	piiréškI (sg.) piirátš (pl.)	piiraˀuˀ	piiraˀuˀ	‘child (small child)’
241	----------	kickee	kickii	‘How much?’, ‘How many?’
242	tiče	kirikee	kirikii, kikii	‘What?’, ‘Which?’
243	čuku	kiru	kiruu	‘Where?’

244	taWIšaapiswaáNA	pitkusiksaapic	pitkusiksaapic	‘seven’
245	nooxiniiwaáNA	rihuksiriiwaara	ruksiriiwaara	‘nine’
246	nooxiíniˀ	rihuksiriˀ	ruksiriˀ	‘ten’
247	nooxíniˀ na áxkUx	askuhuukita	askuhuúkita	‘eleven’
248	nooxíniˀ na pítkUx	pitkususiriˀ	pitkusuusiriˀ	‘twelve’
249	nooxíniˀ na táWIt	tawirihuksiriˀ	tawiruksiriˀ	‘thirteen’
250	nooxíniˀ na čiitíˀIš	rakuukita	rakuukita	‘fourteen’
251	nooxíniˀ na šíhUx	sihukstaruukita	suhukstaruukita	‘fifteen’
252	nooxíniˀ na tšaápis	ksurawiˀuˀ	ksurawiˀuˀ	‘sixteen’
253	nooxíniˀ na taWIšaapiswaáNA	tawit kaakiˀ	tawit kaakiˀ	‘seventeen’
254	nooxíniˀ na taWIšaápis	pitkuskaakiˀ	pitkus-kaakiˀ	‘eighteen’
255	nooxíniˀ na nooxiniiwaáNA	asku-kaakiˀ	ásku-kaakiˀ	‘nineteen’
256	nasaawíˀuˀ	rihuksiriiwiitaˀ uˀ	ruksiriwiitaˀuˀ	‘thirty’
257	pitkUxunaánuˀ na nooxíniˀ	pitkusuraaruˀ rihuksiriˀ	pitkusuraaruˀ a ruksiriˀ	‘fifty’
258	tawihkunaánuˀ	tawiraaruˀ	tawiraaruˀ	‘sixty’
259	tawihkunaanu na nooxíniˀ	tawiraaruurihuksiriˀ	tawiraaruˀ a ruksiriˀ	‘seventy’
260	koohaánuˀ	kuuhaaruˀ	kuuhaaruˀ	‘prairie’, ‘valley’
261	sakUciwátAt	sakuhkiwatat	sakuhkiwatat	‘Monday’
262	pítkUx NAsakuúNU, pítkUx sakuúnuˀ	pitku rasakuuru	pitku rasakuuru	‘Tuesday’
263	táWIt NAsakuúNU, táWIt sakuúnuˀ	tawit rasakuuru	tawit rasakuuru	‘Wednesday’
264	tariinuuwanúx	kskiitiˀiks rasakuuru	kskiitiˀiks rasakuuru	‘Thursday’
265	kawootíkUx	paraaˀi, suhuriˀ rasakuuru	paraaˀi	‘Friday’
266	čeehaanaaniikaroókUx	peeriku	piirikuˀ	‘Saturday’
267	šakUhwaarúxtiˀ	sakuhwaaruksiˀ	sakuhwaaruksiˀ	‘Sunday’
268	waaruxtii	waarukstii	waarukstii	‘be holy’, ‘be sacred’, ‘be mysterious’
269	átit	atit	átit	‘bean’
270	akanaanataáˀuˀ	**akaraarataaˀu**ˀ	ákaraarataaˀuˀ	‘earthlodge’
271	akaánuˀ	akaaruˀ	ákaaruˀ	‘lodge’, ‘dwelling’, ‘house’
272	nut	rutki, ruutuˀ ‘snake, serpent’ (obs.)	rutpaacat, rut- N DEP	‘snake’
273	xaawiítA	**asa(a)wiita**	asáwiita	‘male horse’, ‘male dog’
274	xaahéˀ	asaaheˀ	asáhi , sahi	‘water dog’
275	áxkUsihániˀ	**askuhcihari**ˀ	askuhcihariˀ	‘prairie dog pup’, ‘young prairie dog’
276	áxkUs	askuc	áskuc	‘prairie dog’
277	haahtatwaruˀ	pahruuc	paahuuhc,	‘be

	‘humpbacked trunk (old-fashioned type)’		taatparuuc	humpbacked’
278	naRAsačiruúxU	cakaaˀa	**cakaaˀa**	‘Pleiades’, ‘Seven Sisters’
279	arut	arut	arut	‘be soft’, ‘be tender’
280	isataáˀuˀ	icataaˀuˀ	icataaˀuˀ	‘bread’
281	nuutawáčeš	aawakeks	tawakiks, awakiks	‘alligator’, ‘water monster’
282	xeehaníhtš, seehaníhts ‘newborn colt’	aseehariˀ	ásiihariˀ	‘colt’, ‘young horse’
283	Isíš, síš	caciks	caciks	‘spider’
284	sčéš	ckurahkeks	ckuraahkiiks	‘frog’
285	etčiísuˀ	etkiicuˀ	iitkiicuˀ	‘milk’
286	etwás	etpac	itpaac	‘spleen’
287	hItkahaánuˀ, ItkAhaánuˀ	atkahaaruˀ	itkahaaruˀ	‘ear’
288	čeehaan ‘be a dance society’	keehaar	kiihaar	‘be a dance (as a certain kind of dance)’
289	sčeekáhtš	kskeekahki	kskiikahki	‘gnat’
290	ritkahaan, ratkahaan ‘be a certain night’	ratkahaar	ratkahaar	‘be a night’, ‘be nighttime’
291	neešaánuˀ	reesaaruˀ	riisaaruˀ	‘chief’
292	neešuunuˀ	reesuuruˀ	riisuuruˀ	‘dawn’, ‘period just after daybreak (N)’
293	at	at	at	‘go’
294	áxWIt	aspit	áspit	‘tree frog’
295	aanaaniikaroókUx	----------	----------	‘toothbrush’
296	akAhwiˀoóxUx	akahwiˀuusis	ákahwiˀuusis	‘toilet’, ‘outhouse’, ‘privy’
297	Axwiroóxuˀ	aspiruusuˀ	spiruusuˀ	‘kidney’
298	isuxa ‘to hum’	icusa	icusa	‘puff’, ‘snort’
299	AxwahAtkúsuˀ, kohnít	katuurit	katuurat, kiiwaaks	‘duck’
300	axwahatkusiihániˀ	kiiwakskiˀ	**kiiwakski**ˀ	‘duckling’
301	koóhAt	kuuhat, kiiwaks	katuurat	‘goose’
302	katoóRIt	sakuhkiriku	sakuhkiriku	‘crane’
303	suúnuˀ	cuururaarus	cuururarus	‘porcupine’
304	nikUsčireehániˀ	**rikuhcihari**ˀ	rikuhcihariˀ	‘chick’, ‘baby bird’
305	aniítš	ariikis	hariikis	‘calf’, ‘newborn calf’

306	sapiinaáNUx	cpiiraarus	cpiirarus	‘fly’, ‘housefly’
307	wiiteešútš, wiiteešúč	wiiteesutki, piiteesutki	piitiisutki	‘young man’
308	tskaaxíšuˀ	kickaasisuˀ	kickaasisuˀ, kickaasuˀ	‘sweat’, ‘perspiration’
309	tshunúxuˀ	kicahuruksuˀ	kicahuruksuˀ	‘scalped person’, ‘scalped man (cultural character)’
310	tiRIhuúˀU	tirihuˀu	tirihuˀ	‘it’s big’
311	tAtčiikaáhuˀ	**tatkiikaahu**ˀ	**tatkikaahu**ˀ	‘I’m drinking’
312	tAxčiikaáhuˀ	**taskiikaahu**ˀ	**taskikaahu**ˀ	‘you’re drinking’
313	tičiikaáhuˀ	tikiikaahuˀ	tikikaahuˀ	‘(s)he’s drinking’
314	taatá	taata	tata	‘I’m eating’, ‘I ate it’
315	taatátkoˀ, taatAtkóˀ	taatatkuˀ	taatatkuˀ	‘I heard’, ‘I heard it’
316	tatuunátkoˀ	tatuuratkuˀ	tatuuratkuˀ	‘I heard it from her/him’
317	----------	**tatuuteerit**	tatuutiirit	‘I see her/him/it’, ‘I looked at her/him/it’
318	tUsuuxeéRIt	----------	----------	‘(s)he saw him/her/it’
319	taatawáxkuˀ	taatawaskuˀ	taatawaskuˀ	‘I’m laughing’
320	----------	**tiiwasku**ˀ	tiiwaskuˀ	‘(s)he is laughing’
321	tatiínaˀ	tatiiraˀ	**tatiira**ˀ	‘I came’
322	tAxiínaˀ	**tasiira**ˀ	**tasiira**ˀ	‘you came’
323	táˀ, wetáˀ	taˀ	**ta**ˀ	‘he came’
324	taátAt	taatat	**taatat**	‘I went’
325	taáxAt	**taasat**	**taasat**	‘you went’
326	tíˀAt	tiˀat	**tiˀat**	‘(s)he went’
327	nootipahaáˀAt	tipahaaˀat	tipahaaˀat	‘it’s red’
328	tičiišawataáˀA	titaakaaˀa, tikiisawataaˀa ‘it’s bright white’	titaakaaˀa, tikiisawataaˀa ‘it’s bright white’	‘it’s white’
329	tAhnaanoókuˀ	tahraaruukuˀ	tahaaruukuˀ	‘I’m singing’
330	tAxtaanoókuˀ	**tastaaruuku**ˀ	**tastaaruuku**ˀ	‘you’re singing’
331	taatItká	taatitka	**taatitka**	‘I’m sleeping’
332	taaxItká	**taasitka**	**taasitka**	‘you’re sleeping’
333	títka	titka	titka	‘(s)he’s

				sleeping’
334	tikisčípi	tikuckipi	tikuckipi	‘I’m sleepy’
335	tesčípi	----------	----------	‘you are sleepy’
336	tisčípi	tickipi	**tickipi**	‘(s)he’s sleepy’
337	tikuhAstaahíš	tikuhactaahis	tikuhactahiis, tikuhactahis	‘I’m thirsty’
338	tahAstaahíš	**tahactaahis**	**tahactahis**	‘you’re thirsty’
339	tihAstaahíš	tihactaahis	**tihactahis**	‘(s)he’s thirsty’
340	tikuNAsáʾUx	tikuhracaʾus	tikuuhacaʾus	‘I’m hungry’
341	tooNAsáʾUx	**tuuracaʾus**	tuuhacaʾus	‘you’re hungry’
342	tuNAsáʾUx	tuhracaʾus	tuuhacaʾus	‘(s)he’s hungry’
343	teérut	teerut	tiirut, witirut	‘(s)he/it is soft’
344	tičiíʾIs	tikiʾic	tikiʾic	‘it’s a liquid’, ‘it’s watery’
345	----------	tihuta	tihuta	‘it’s windy’
346	taasúʾaʾ, wetaasúʾaʾ	wetaacuuʾaʾ	taacuuʾaʾ, witaacuuʾaʾ	‘it’s raining’
347	tikoótIt	tikuutit	tikuutit	‘(s)he kills it’
348	tAtčíkAt	**tatkikat**	**tatkikat**	‘I’m crying’
349	tAxčíkAt	**taskikat**	**taskikat**	‘you’re crying’
350	tičíkAt	tikikat	tikikat	‘(s)he’s crying’
351	taatáRIt	taatarit	taatarit	‘I’m standing’
352	teéRIt	teerit	tiirit	‘(s)he’s standing’
353	tikuutáRIt	**tikuutarit**	**tikuutarit**	‘he stands up for me’, ‘he represents me (as an attorney does a client)’
354	-x-	**-s-**	**-s-**	2.A

(All Arikara kinship terms and verbal words found in Parks 1979; all South Band Pawnee kinship terms found in Parks 1976; all Skiri Pawnee kinship terms found in Parks 2008; all other words found in AISRI Arikara, South Band Pawnee, Skiri Pawnee Dictionary Portal)